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Ready Streets, Parkrose and Argay: Community Report

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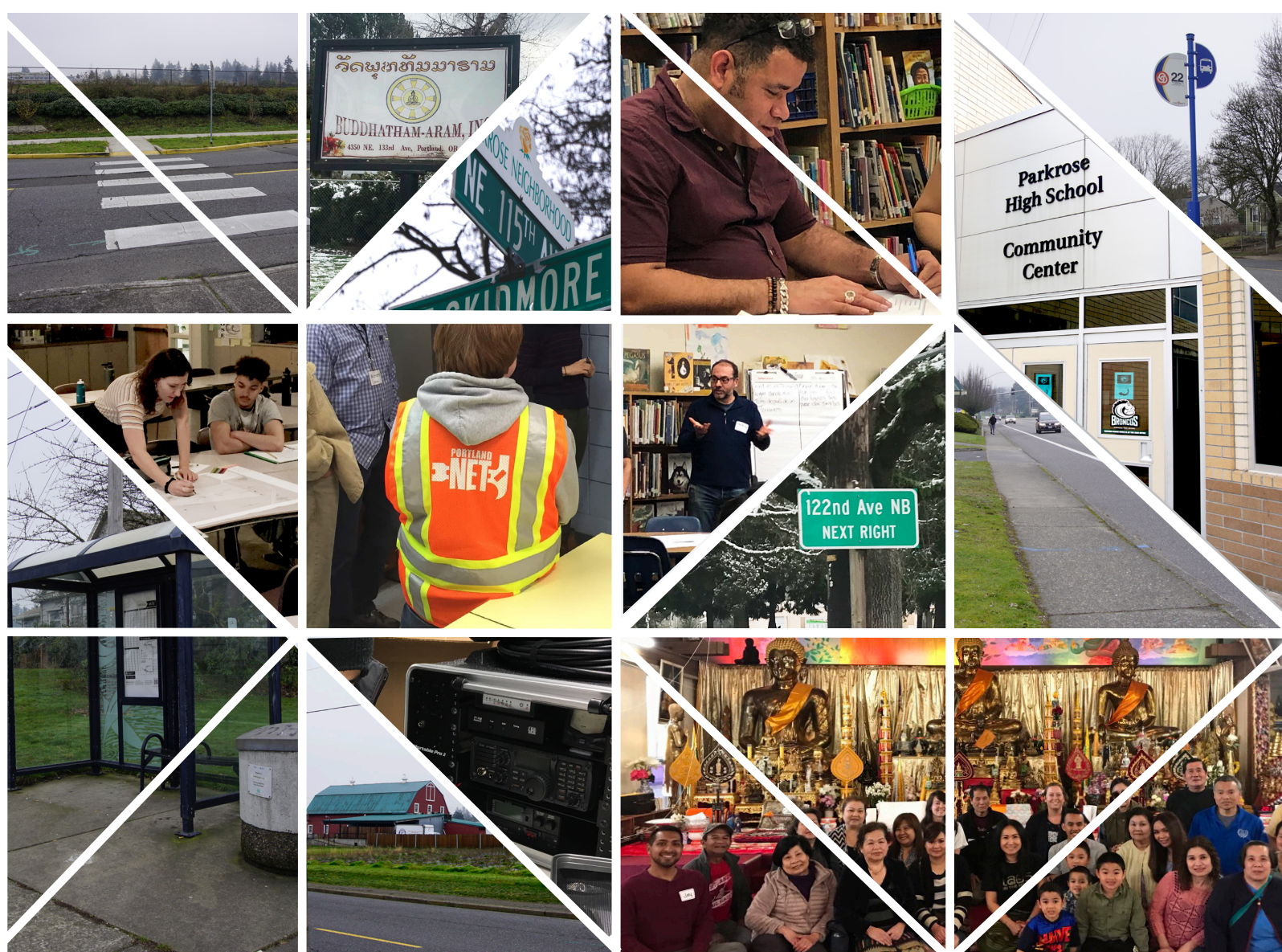
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readystreets

Parkrose and Argay

Technical Report

June 2019



acknowledgments

This document summarizes the capstone project done by Portland State University graduate candidates in the Masters of Urban and Regional Planning program for the Portland Bureau of Transportation (PBOT), with additional guidance from the Portland Bureau of Emergency Management (PBEM). The project would not have been possible without community partners in the Parkrose and Argay neighborhoods in Portland. Their contributions and warm welcome into their communities are deeply appreciated. The community partners are as follows:

- > Latino Network
- > Wat Buddhatham Aram Laotian Temple
- > Neighborhood Emergency Team
- > Parkrose High School
- > Xtra Years of Zest

Land Acknowledgment

The Portland metropolitan area covers traditional and ancestral homelands of indigenous peoples: the Multnomah, Kathlamet, Clackamas, Tumwater, Watlala bands of the Chinook, the Tualatin Kalapuya and many other indigenous nations of the Columbia River.¹

Note: all photos were taken by SAFE Planning unless otherwise noted.

Footnotes

¹ "Portland State Global Diversity & Inclusion: Cultural Resource Centers | Welcome," Portland State University, accessed May 27, 2019, <https://www.pdx.edu/cultural-resource-centers/>.

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01 executive summary

Background & Assumptions

The Portland Metro area is highly vulnerable to earthquakes and is historically overdue for a high magnitude seismic event. Our vulnerability to this hazard, while higher because of our proximity to the Cascadia Subduction Zone, is mainly because our infrastructure, systems, and people are unprepared to withstand and recover from a large natural disaster. Our transportation networks are no exception and it has never been more urgent than now to take action. The vision from the City of Portland 2035 Comprehensive Plan, adopted by City Council and put into effect in 2018, is a **prosperous, healthy, equitable and resilient city** where everyone has access to opportunity and is engaged in shaping decisions that affect their lives.² Additionally, one of the five guiding principles of the Comprehensive Plan that shape many individual policies and projects centers on resilience. **A resilient Portland is one that can bounce back, move forward and become stronger over time.**³

SAFE Planning, which stands for **Supporting Access for Everyone**, believes investments and programs that build neighborhood resiliency are the best way to increase Portland's ability to recover and build a better future after a major earthquake.

In the winter and spring of 2019, SAFE Planning, a group of Masters in Urban and Regional Planning candidates at Portland State University (PSU), engaged with the Parkrose-Argay community to gather

comments, concerns, and questions relating to mobility and earthquake resiliency. Building on the project goals and objectives, the public engagement process aimed to identify important community destinations and community assets within Parkrose-Argay, reach out to underserved and limited English proficiency (LEP) communities, and foster partnerships between community organizations and the Portland Bureau of Transportation (PBOT).

Through lessons learned from the research and public involvement phases of the project, as well as what we think is feasible for PBOT to take on in the future, the SAFE Planning team created a **framework of recommended actions for PBOT on how to build a resilient, neighborhood-level mobility network**. Our framework is intended to guide PBOT's future decision making around neighborhood-level resilience as well as outline next steps towards implementation. This executive summary includes one example of what implementation could look like in the the Parkrose-Argay neighborhood for each element of the framework. Further detailed explanations and examples can be found in the recommendations section of the technical report.

Recommendations for a resilient transportation system



Resilient physical infrastructure

Resilient physical infrastructure is a key piece in the ability of the network to bounce back. It is also an opportunity to potentially shift transportation habits of a neighborhood and community. A resilient physical infrastructure is **seismically sound and built to mitigate the risks of the hazards** that threaten it.

Example: Seismically retrofit the I-84 overpass bridge at NE 122nd Avenue

In this neighborhood, the I-84 overpass bridge that crosses NE 122nd Avenue is likely to collapse in an earthquake and will cut off one of the main arterial streets used to move in and out of the neighborhood. PBOT should partner with the Oregon Department of Transportation (ODOT) to prioritize seismically updating this bridge as it aligns with goals identified in the transportation section of the Oregon Resilience Plan. We recommend this as a “short term” solution, to be done within the next 10 years.



Diversifying uses of the network

A neighborhood-level resilient transportation network should include infrastructure and accessibility for multiple modes, and **prioritize walking and “rolling”** activities such as biking and personal mobility devices.

Example: Install recovery information and maps at current transportation hubs in the neighborhood like bus stops and bus shelters

Using the places that people already frequent would elevate awareness of the existing recovery infrastructure. In the Parkrose-Argay neighborhood, this could be done by displaying recovery information at transit stops and on buses and trains, and would bring a daily, passive awareness of disaster preparedness and planning efforts.



Increasing capacity and capability of community

In order to be resilient, a transportation network needs to be able to recover to a usable state quickly. Having diversified uses and resilient infrastructure helps the network recover quickly, but a neighborhood also needs **local people with decision-making and leadership capacity to be invested in supporting recovery efforts.**

Example: Fund disaster resilience community liaison positions within PBOT

Hiring culturally specific community liaisons builds the capacity of PBOT to connect and provide education and outreach to communities. These positions must be funded positions, as opposed to volunteer positions, and should provide all of the opportunities for advancement and support within PBOT offered to other positions of the same employment category. This strategy should be paired with a full or part time staff member at PBOT to coordinate resources and needs of the disaster community liaisons.



Delegating local decision-making power

Actions like demographic analyses of neighborhoods and translating materials into other languages are needed to plan for a community, however strategies need to go deeper into **transferring decision-making, planning, and funding ability to the local level.**

Example: Plan with the Whole Community

One of the most effective ways PBOT can plan with the “whole community” is by convening an disaster recovery stakeholder task force. This should comprise of community members who represent culturally specific communities within the neighborhood and the task force should have real decision-making power to spend allocated funds and implement strategies; PBOT should be an equivalent stakeholder on the task force and not the decision-making force.

As PBOT moves into the new field of disaster resiliency planning, we suggest prioritizing actions that build social resilience concurrently with disaster risk reduction strategies. Prioritizing projects that focus on social resilience will be the best use of PBOT’s resources and position as a local governmental bureau and public service agency.

2 “2035 Comprehensive Plan,” 2035 Comprehensive Plan RSS, accessed June 03, 2019, <https://www.portlandoregon.gov/bps/57352>.

3 *Ibid.*

02 overview

The mission of SAFE Planning is to help the Parkrose and Argay communities navigate across their neighborhoods during the post-disaster recovery phase of an earthquake.

Goal 1 Identify key destinations and how people will get there in the community

Strategy 1.1 Conduct extensive community engagement

Strategy 1.2 Conduct extensive research on existing conditions and hazards present

Goal 2 Determine the role that PBOT might play in creating access to identified key destinations in the implementation phase

Strategy 2.1 Make recommendations to PBOT based on outcomes of the community engagement process and research

SAFE Planning

SAFE Planning is a team of six Masters in Urban and Regional Planning candidates at Portland State University. The team has collective experience in urban planning, emergency management, transportation,

and equity. We approached this project with humility and strove to continuously learn from members of the community. SAFE stands for “supporting access for everyone,” which the team values strongly.

Key Partners

The field of emergency management addresses a variety of disasters, both natural and human-caused. It consists of federal, state, and local government agencies, as well as nonprofits addressing these disasters. The Portland Metro area is home to multiple agencies focusing on emergency management, including the Multnomah County Office of Emergency Management (MCEM), the Portland Bureau of Emergency Management (PBEM) and the Regional Disaster Preparedness Organization (RPDO).

MCEM handles emergency management coordination within the entire county. The mission of RDPO is to build and maintain regional disaster preparedness capabilities. PBEM is the city-level government agency focusing on disasters. Its mission is to “promote readiness, coordinate response, and build resilience for Portland.”⁴ It brings together local governments from five counties, multiple city governments, and other organizational representatives to collectively address disaster capabilities.

Our key community partners on this project were Latino Network, Wat Buddhatham Aram Buddhist Temple, and the Parkrose/Argay Neighborhood Emergency Team (NET). Latino Network’s mission is to positively transform the lives of Latino youth, families, and communities throughout Portland, Oregon.⁵ Wat Buddhatham Aram is a Laotian Buddhist temple in the Parkrose/Argay neighborhood. The Neighborhood Emergency Teams (NETs) are Portland residents trained by PBEM and Portland Fire & Rescue to provide emergency disaster assistance within their own neighborhoods.⁶

Background

In 2015, an article in the New Yorker brought national scrutiny to the Pacific Northwest, revealing the high risk and extreme vulnerability of our region to earthquakes. Since then, emergency management entities in Portland have worked to fund and prioritize efforts to build local response capacity. In the event of an earthquake, Oregon may lose the vast majority of its fuel supply, with the remaining fuel rationed for first responders. During the **2-30 day timeframe** after the disaster, survivors **may not be able to utilize normal mobility modes** like driving or taking public transit to complete essential tasks like accessing food and clean water, dealing with sewage, and connecting with friends and family. Communities will be surrounded by debris clearance efforts while beginning to find ways to return to essential work duties, school, and other endeavors. **Human-powered mobility modes, such as walking and rolling, will play a critical role** in all aspects of recovery.

Human-powered mobility during disaster recovery has yet to be examined regionally, nationally, or internationally, despite its fundamental role in the many facets of disaster recovery. The Ready Streets project examines how a resilient, neighborhood

network centered on human-powered mobility could help people get around their neighborhoods after a disaster, when cars and buses are not a viable option. The study area for this project encompasses the Argay Terrace (often shortened to Argay) and Parkrose neighborhoods which are located in Northeast Portland. The neighborhoods are bounded by Maywood Park on the west and NE 148th Avenue on the east. The likelihood of I-84 and I-205 freeway bridges collapsing as a result of a 9.0 magnitude earthquake is high.⁷ This disruption, paired with other hazards, will create the need for a resilient transportation network to move people and goods around these neighborhoods without access to automotive (gas and/or diesel powered) transportation.

Assumptions

This project will operate on the following set of assumptions:

This project considers a large seismic event that causes major service disruption and major structural damage as the disaster (predicted CSZ 9.0 magnitude earthquake). The size of the assumed seismic event will disrupt electricity for 1-3 months, clean water and sewer services for 1 month to a year, top-priority highways for 6-12 months, and healthcare facilities for 18 months.⁸ Assuming the scenario of a major earthquake will, by default, cover the planning needs for smaller disasters.

This project looks at the period 2-30 days after a disaster, often described as the recovery phase. Most efforts in the first 48 hours (often referred to as the response phase) will be focused on ensuring life safety for everyone. However, many past disasters have shown that more people die from a lack of access to clean water, medical care, food and/or shelter in the recovery phase than they do in the initial event and response phase.

Access to automotive transportation will be very limited after a major earthquake due to compromised roads and bridges, fuel shortages, and city-wide fuel rationing.

Some people are more favorably positioned to withstand disasters than others. Systemic and structural inequities including those related to racism, ableism, physical infrastructure, available resources, social capital, and opportunity structure compound during a disaster event and affect a person's ability to survive a disaster and thrive afterward.

disaster management & the role of transportation

To understand the concept of a resilient transportation network, SAFE Planning first had to explore the field of disaster management. Disaster management can be seen as a cycle revolving around the disaster and divided into four phases (Figure 1). The timeline is frequently broken down as follows: immediately following a disaster is the response phase (immediate - 48 hours), followed by the recovery phase (2 days - 1 month), then the mitigation phase (ongoing), and the preparedness phase (ongoing). The Ready Streets project focuses on the **recovery phase of disaster management** because it is the phase that **governments have the least knowledge, but potentially has the largest impact on vulnerable communities** long term.

Transportation is a fundamental piece of all communities and is considered a lifeline in times of emergency. After a regional seismic event, **walking and biking (active transportation) will be a prominent form of mobility** due to potential fuel shortages and road obstructions. In this project, we expand traditional definitions of active transportation that focus solely on walking and biking to also encompass wheelchairs or personal mobility devices, strollers, wagons, carts, or other wheeled cargo. We summarize these modes as human-powered mobility and refer to them within this report as “walking and rolling”. In addition to their use in disaster recovery, **human-powered mobility modes are an affordable and a viable means of moving people and goods around** and contribute to health and accessibility on a daily basis.⁹

Even though we have expanded our definition of active transportation, there are many elements unique to active transportation that could inform improvements in infrastructure for human-powered mobility. The City of Portland explicitly aims to increase active transportation options with policy documents, such as the Bicycle Plan for 2030, PedPDX (Portland’s Master Pedestrian Plan), and the Transportation System Plan (TSP). These planning documents will **increase network connectivity and capacity** for these mobility options while addressing safety and infrastructure improvements.

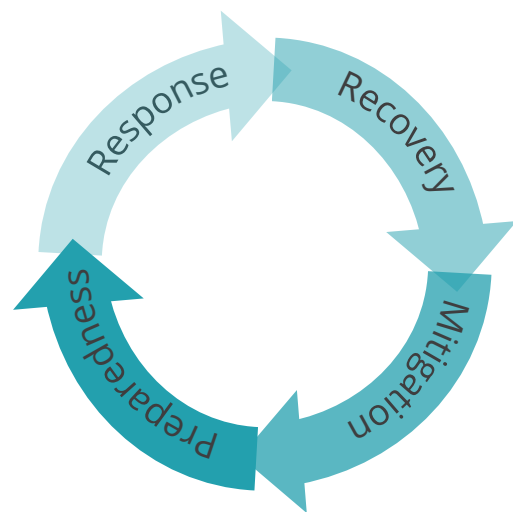


Figure 1: The four phases of disaster management.

⁴ “About Us,” About Us RSS, accessed June 02, 2019, <https://www.portlandoregon.gov/pbem/53892>.

⁵ “Overview,” Latino Network, accessed June 02, 2019, <https://www.latnet.org/overview-aboutus>.

⁶ “NETs,” NETs RSS, accessed June 02, 2019, <https://www.portlandoregon.gov/pbem/31667>.

⁷ “www.oregon.gov,” accessed June 2, 2019, <https://www.oregon.gov/ODOT/Planning/Documents/Seismic-Lifelines-Evaluation-Vulnerability-Synthese-Identification.pdf>.

⁸ “www.oregon.gov,” accessed June 2, 2019, https://www.oregon.gov/oem/Documents/Oregon_Resilience_Plan_Final.pdf.

⁹ “Healthy Places,” Centers for Disease Control and Prevention, accessed June 02, 2019, https://www.cdc.gov/healthyplaces/transportation/promote_strategy.htm.

03 existing conditions

Study Area Delineation

SAFE Planning's study area encompasses the **Argay Terrace** (often abbreviated to Argay) and **Parkrose** neighborhoods which are located in Northeast Portland (Figure 2). The neighborhoods are bounded by Maywood Park on the west and NE 148th Avenue on the east. The area is primarily residential with industrial uses located north of Sandy Boulevard.

The Parkrose and Argay neighborhoods were annexed to the City of Portland between 1981-1990, along with large areas to the south and west, and additional regions around the City borders.¹⁰



Figure 2: Project Study Area. Source: PBOT

Initially, Parkrose and Argay were selected as the study area for the Ready Streets project because there are **very active NET (Neighborhood Emergency Teams)** members. Over the course of working on this project, the SAFE Planning team additionally identified higher equity concerns, including **high proportions of low-income communities and people of color** compared to the rest of Portland. Homeownership rates for Black or African American and Hispanic or Latino households are lower in Parkrose-Argay than in Portland overall. This neighborhood is one of the only in Portland to have experienced net population loss in recent years. In combination with higher proportions of low-income people, this neighborhood is thus more vulnerable to not receive significant livability investments from the City.

The neighborhood is at **great risk of being isolated** from the rest of the City due to surrounding hazards. The industrial area of the neighborhood (north of Sandy Boulevard) faces significant risk of liquefaction in the event of an earthquake. Furthermore, the likelihood of the I-84 and I-205 freeway bridges collapsing as a result of a 9.0 magnitude earthquake is significantly high. This disruption, paired with other hazards, will create the need for a resilient way for people to move around these neighborhoods without access to automotive (gas and/or diesel powered) transportation. Therefore, the assets within the neighborhoods themselves will be of critical importance.

Parkrose & Argay Neighborhoods

Our initial demographic analysis examined the two census tracts in Parkrose and Argay, Census Tracts 79 and 95.02, and compared these numbers to the overall demographics in Portland. Using the Environmental Protection Agency's (EPA) EJSCREEN Mapping Tool, the team also identified that although Argay, or Census Tract 95.02, has a higher median household income and lower percentage of people of color, Block Group 3 (Figure 3) within this census tract has a higher proportion of low-income households and a greater minority population.

The Portland Bureau of Transportation's (PBOT) Racial Equity Toolkit, which combines Race and Income metrics with considerations for Limited English Proficiency, demonstrates variability across the study area. However, overall as a neighborhood, the area scores high in these measures. This justifies focused support from City bureaus like PBOT to populations facing higher barriers than more affluent people in other areas of Portland. The following section examines Race, Income, and Limited English Proficiency (LEP) individually, in addition to Age and Education Attainment measures.

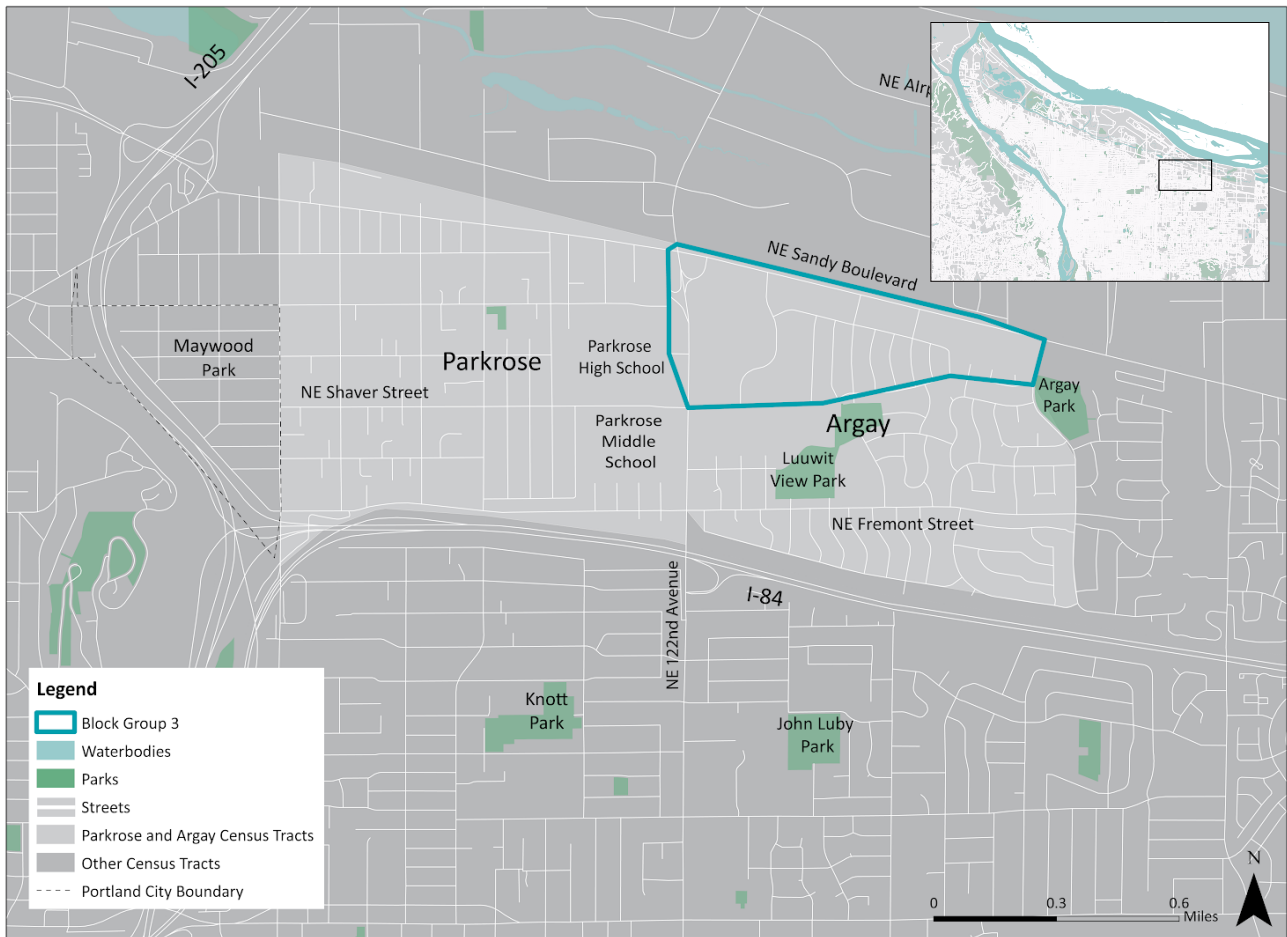


Figure 3: Project Study Area. Source: PBOT

race and ethnicity

The Parkrose neighborhood (Census Tract 79) and the Argay neighborhood (Census Tract 95.02), have higher proportions of people of color. In 2017, the percentage of people that identified as White was 56.6 percent in Parkrose and 52.2 percent in Argay (Table 1). Compared to 71 percent in the City of Portland, The White population in Block Group 3 (Argay) is even lower, at

34.5 percent of the total population. The percentage of people that identify as Black or African American, Asian and Hispanic or Latino are also considerably higher in the two census tracts and Block Group 3 (Argay) when compared to the City of Portland as a whole. The Asian population in Block Group 3 (Argay), at 18.1 percent, is more than double the city's percentage. The

proportion of people that identify as Black or African American in Block Group 3 (Argay), at 12.1 percent, is also more than twice the city's percentage. Block Group 3 (Argay) also has a significant Native Hawaiian and Other Pacific Islander community at 7.3 percent when compared with the City at 0.6 percent.

	Parkrose	Argay	Block Group 3 Argay	Portland, OR
White	56.6%	52.2%	34.5%	71.0%
Black or African American	10.1%	9.7%	12.1%	5.6%
American Indian and Alaska Native	0.6%	0.0%	0.0%	0.6%
Asian	10.8%	15.3%	18.1%	7.7%
Native Hawaiian & Other Pacific Islander	0.0%	3.8%	7.3%	0.6%
Hispanic or Latino	14.2%	11.8%	19.6%	9.7%
Total Population	4,430	3,853	1,988	630,331

*Table 1: Race in Census Tracts 79 (Parkrose) and 95.02 (Argay), Block Group 3 and Portland, OR
Source: American Community Survey, 2013-2017*

Ethnicity in Parkrose, Argay, Block Group 3, and the City of Portland

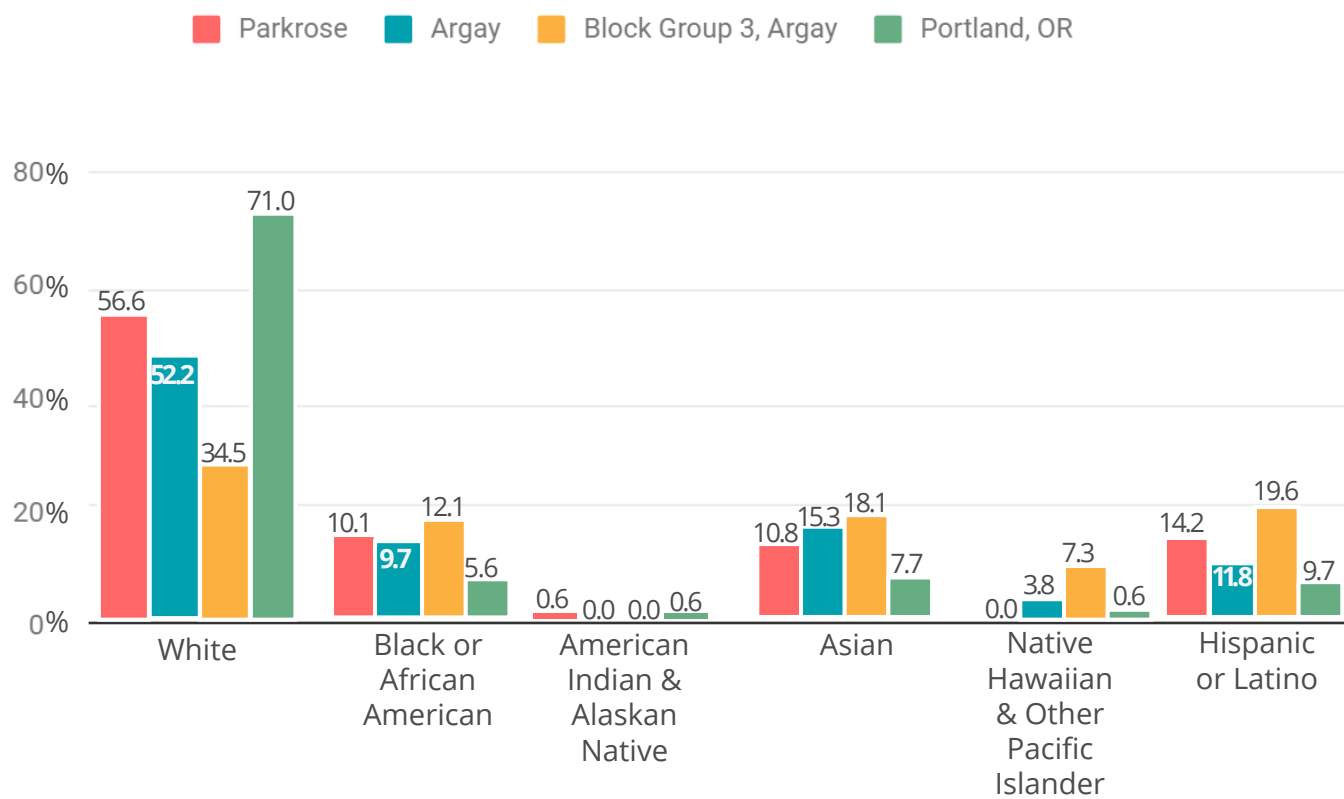


Figure 4: Ethnicity in Block Group 3 (Argay), Parkrose and Argay Neighborhoods, and City of Portland
Source: American Community Survey, 2013-2017 estimates

income

In 2017, the median household income in the Parkrose neighborhood, \$45,077, was substantially lower than the city's median, \$61,532 (Figure 5). On the other hand, the median household income in Argay, \$63,472, was higher than the city's median household

income. Although Argay has a higher income area than Parkrose, Block Group 3 (Argay) has a significantly lower median household income, \$41,389, than the median for the neighborhood. Therefore, in terms of post-disaster recovery resources and assets, the people living

in Block Group 3 (Argay) potentially are a **more vulnerable population**. However, it is important to note that the margin or error is particularly high (\$14,743) for the median household income calculated in Block Group 3 (Argay).

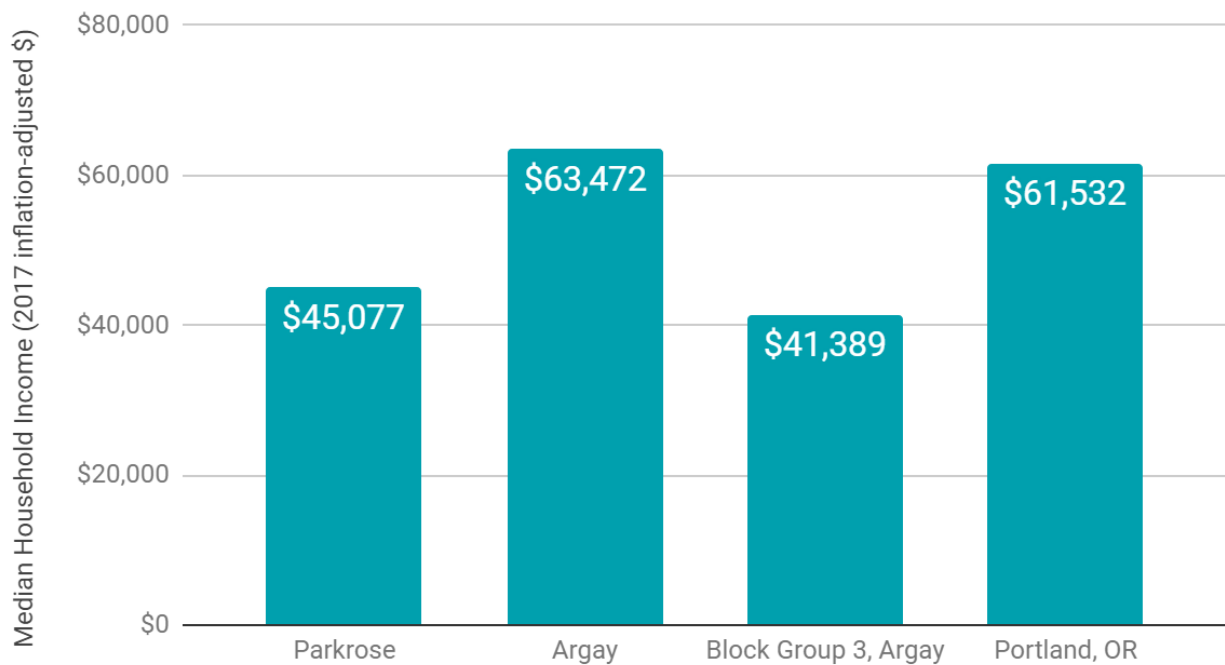


Figure 5: Median Household Income (2017 inflation-adjusted \$) in Parkrose, Argay, Block Group 3 and Portland, OR. Source: American Community Survey 2013-2017

limited english proficiency households

Within Census Tracts 79 (Parkrose) and 95.02 (Argay), the percentage of Limited English Proficiency (LEP) households were 8.5 percent and 8.4 percent respectively (Table 2). This is **more than double** the percentage in the **City of Portland**, at 4 percent. The largest LEP language group for both census tracts is Asian and Pacific Island languages, at 4.9 percent in Parkrose and 5.5 percent in Argay. The second largest LEP language group is Spanish, with 2.5 percent in Parkrose and 1.7 percent in Argay.

According to the PBOT Equity Matrix, the most commonly spoken non-English language in Parkrose is Vietnamese.¹¹ The second most commonly spoken non-English language is Spanish. Similarly, in Argay, the most commonly spoken non-English language is Spanish and the second most commonly spoken non-English language is Vietnamese. This information helped guide SAFE Planning’s public involvement strategy, especially when determining which communities to reach out to, and which languages

to hire translators for their community conversations. In Block Group 3, the percentage of LEP households is even higher than the proportion in both Parkrose and Argay, at 13.1 percent and 3.2 percent of the LEP households speak Spanish and 7.6 percent of the LEP households speak Asian and Pacific Island languages. With a higher proportion of LEP households, the Block Group 3 geography could be particularly vulnerable in post-disaster recovery.

	Parkrose	Argay	Block Group 3 Argay	Portland, OR
LEP	8.5 %	8.4 %	13.1%	4.0 %
English only	69.1%	78.6 %	76.1%	81.1 %
Spanish - LEP	2.5 %	1.7 %	3.2 %	1.2 %
Other Indo-European languages - LEP	0.7 %	0.4 %	0.8 %	0.7 %
Asian and Pacific Island languages - LEP	4.9 %	5.5 %	7.6 %	1.7 %
Other languages - LEP	0.3 %	0.8 %	1.5 %	0.3 %
Total Households	1,792	1,586	854	260,949

Table 2. Limited English Proficiency Households in Census Tracts 79 and 95.02, Block Group 3 and Portland, OR
Source: American Community Survey, 2013-2017

education

Educational attainment in the Parkrose-Argay neighborhood is **generally lower than in Portland** overall (Table 3). Between Parkrose and Argay, there are similar educational achievement levels. However, when Block Group 3 is examined on its

own, educational attainment decreases. The rate of those without high school diplomas is 11.9 percent greater in Block Group 3 than in Portland overall. The proportion of those with some college experience is higher in this block group than in

the census tracts, which is most likely due to the fact that higher percentages of the population in other census tracts went on to obtain a bachelor's or graduate or professional degree.

	Parkrose	Argay	Block Group 3 Argay	Portland, OR
Less than High School	16.9%	10.0%	20.1%	8.2%
High School	23.3%	24.1%	21.0%	15.7%
Some College	32.0%	39.1%	44.9%	28.0%
Bachelor's Degree	19.0%	18.3%	12.5%	28.8%
Graduate or professional degree	8.9%	8.6%	1.5%	19.4%

*Table 3: Highest Educational Attainment for Population 25 Years and Over
Source: American Community Survey, 2013-2017*

PBOT equity matrix

The PBOT Equity Matrix is an equity ranking index that helps guide the City's work and investments. The matrix uses two demographic variables, race and income, and outlines neighborhoods that have a higher density of limited English proficiency populations than the City average.¹² Compared to the city as a whole, equity

scores in the Parkrose/Argay neighborhoods are high, meaning they have **higher levels of people of color and low-income people** than the rest of Portland; the scores are, however, consistent to other parts of East Portland. Both neighborhoods also have a greater percentage of LEP households than the citywide average. Investing in disaster

resiliency in the Parkrose/Argay neighborhood is especially important because of the higher proportions of people of color, people with low incomes, and people with limited english proficiency as these groups are often the most vulnerable to disaster risks.

Physical Geography

The built environment features interplay with the natural environment across the Parkrose and Argay neighborhoods, creating varying predictors as to how the area will fare during and after a major seismic event. All of I-84 in the project study area is rated with low seismic resilience and is highly likely to collapse, isolating the Parkrose-Argay neighborhoods (Appendix A, Map 1). The steep slopes of Rocky Butte Park,

adjacent to the I-205 and I-84 interchange, present a high chance of landslides. In addition to the collapse of freeways, the Columbia River could further the island effect for these neighborhoods. The area closest to the Columbia River, including the historic floodplain, faces accentuated risk of liquefaction and levee failure.

vulnerability

According to FEMA flood hazards data, the Columbia River is unlikely to flood south of Northeast Sandy Boulevard (Appendix A, Map 1). Most land use within this flood hazard zone is industrial as opposed to residential, however the timing of flooding events are unpredictable and people may be in the more hazardous area for work or other reasons.

The liquefaction zone indicates the areas north of the liquefaction boundary, which are located on the north side of Parkrose and Argay (Appendix A, Map 2), are at risk of being damaged. Some of the effects of liquefaction include **cracks in roads and collapsed or damaged bridges** (Figure 6). According to the data, the roads south of the

liquefaction boundary are more likely to remain stable and intact, and it may be easier for the community to move around the neighborhoods by utilizing these roads.

The areas near water lines and levees are more at risk of flooding. In the event of an earthquake, pipes may burst, causing flooding to occur. These areas are primarily along the southern edge of Columbia River, which is a commercial and industrial zone, along NE 142nd Avenue and along NE 162nd Avenue. All of these areas are outside of the project study area, but areas within the study area especially areas near NE 142nd Avenue may be more susceptible to flooding

While according to an Oregon Department of Transportation

(ODOT) Seismic Lifelines Report, the bridges on the portion I-84, from their origin in the Central Eastside of Portland to Eastern Oregon, are characterized as having low seismic resilience.¹³ The I-205 bridges, from Vancouver, Washington to I-84, are also characterized as having low seismic resilience. This criteria for bridge seismic resilience is based on the probability of the bridge being closed or destroyed in the event of an earthquake and the probability of the bridge being closed or destroyed due to foundation failure resulting from liquefaction. Bridges that were rated as low have a low probability of being able to survive a seismic event without affecting the flow of traffic.



Figure 6: Liquefaction in Christchurch, New Zealand
Source: Martin Luff, Flickr

landslide risk

The landslide probability or risk data, collected from the Oregon Department of Geology and Mineral Industries (DOGAMI), indicates that the risk of a landslide after an earthquake is relatively low (either low or moderate) for most of the area covering the Parkrose and Argay neighborhoods (Appendix A, Map 3). However, there are a few areas on the fringes of the study area that are more

susceptible to a landslide. The majority of these areas are hills, so the slopes are greater. For example, Rocky Butte Park, a park just west of I-205, has a high probability of landslides. Based on this data, the majority of residents of the Parkrose and Argay census tracts will not be at risk of a landslide, if they happen to be in their homes or in any of the buildings or on the streets in these two census tracts. In fact, there

are almost no buildings in these high probability areas. Buildings that are close to these areas, however, would experience some risk of being in the path of landslide debris. It is important to note that landslide data is based on probability, so it is uncertain whether landslides will actually occur in the areas that are categorized as “high”.

Infrastructure

This section describes structures, systems, and urban properties which are currently in place in the Parkrose-Argay neighborhood. In the event of a major seismic event, a majority of amenities that could serve as assets or resources, such as schools, a Basic Earthquake Emergency Communication Node (BEECN) site, and faith-based organizations, are concentrated within Parkrose and the west side of Argay. Emergency Transportation

Routes (ETRs) have been designated at multiple levels of government, with some disagreement between local designations and official regional Emergency Transportation Routes as the routes are currently in the process of being updated.

amenities and assets

The Parkrose and Argay neighborhoods have an active Neighborhood Emergency Team (NETs). NETs are Portland residents trained by Portland Bureau of Emergency Management (PBEM) and Portland Fire & Rescue (PFR) to provide emergency disaster assistance to community members within their own neighborhoods. Having an active volunteer network makes these neighborhoods good candidates for a community-level mobility plan because this type of organization plays a **crucial role in post-disaster recovery**. The Parkrose neighborhood also has a BEECN site that is located at the Parkrose Middle School field.

Parkrose and Argay have a number of activity centers, including schools, businesses, which are primarily located along Sandy Boulevard. In addition, religious institutions

are concentrated along NE Wygant Street and NE Prescott Street. All of these centers could be utilized as key destinations, for resource distribution or for community members to congregate, in the event of an earthquake.

Below is a list of neighborhood amenities that were determined

through Google Maps and OpenStreetMap data, and field observations (Table 4). There are a number of places of worship in Argay, which are primarily positioned along Sandy Boulevard, including Wat Buddhatham Aram Temple, a Laotian Buddhist temple.

Neighborhood Amenity	Count
Places of worship	24
Restaurants	17
Schools	9
Parks/open spaces	7
Social/recreation facilities	3
Grocery stores	2
Assisted living facilities	2
Farms	1
Hardware stores	1

Table 4. List and Count of Neighborhood Amenities¹⁴
Source: Open Street Map, Google Maps, and SAFE Planning observations

portland's street classifications

The updated Portland Transportation System Plan was adopted in May 2018.¹⁵ The Plan designates the highways (I-84 & I-205) that form the western and southern borders to the neighborhood as Regional Trafficways (Appendix A, Map 4). Sandy Boulevard and NE

122nd Avenue are classified as Major City Traffic Streets. Although examples exist in other parts of the City, there are no street segments in Parkrose-Argay that are both Regional Trafficways and Major City Traffic Streets. On the western boundary of the study area, NE 102nd Avenue

is designated as a District Collector Street. There are about 10 street segments in Parkrose-Argay designated as Neighborhood Collector Streets. The rest of the street segments are classified as local streets.

emergency transportation routes

The Regional Emergency Transportation Routes (ETRs) depicted in the Appendix A, Map 5 are the formalized emergency routes agreed upon by local, regional, and state agencies. These roads will be **prioritized for emergency response and the movement of goods, people, and supplies** across the City. However, these routes were designated in the 1990s and are currently undergoing an update process. PBOT and ODOT have started a process to update the routes, and the unofficial work is depicted as Draft Emergency Transportation Routes. The only additional suggestion from the draft new routes

within Parkrose-Argay is part of an interchange between Sandy Boulevard and NE 122nd Avenue. This interchange is adjacent to PFR training facility.

PBOT has been involved in additional emergency route classification (Appendix A, Map 6). The TSP identifies multiple road segments which are not identified elsewhere. The PBOT/PFR initiative identifies the segment of NE 102nd Avenue which forms a western boundary for Parkrose, as well as the segment of Fremont Street between NE 102nd Avenue and NE 122nd Avenue. This segment of NE Fremont Street runs parallel to I-84.

Other than these two route segments, the other local roads identified by PBOT and PFR are all part of regional ETRs.

The TSP identifies multiple Major Emergency Routes which are not officially designated ETRs. Segments within the study area are NE 102nd Avenue along the Western border of the study area, the length of NE Fremont Street which passes through the study area, and NE 141st Avenue along the Northeastern boundary of the study area. As well, small segments which compose the interchange between NE Sandy Boulevard and NE 122nd Avenue are included.

street surface

Most of the street surfaces in Parkrose-Argay are paved (Appendix A, Map 7). Unpaved road segments are concentrated in the northwest corner of the neighborhood, mostly in

the commercial/industrial areas. In our research, SAFE Planning has not found conclusive evidence as to how paved roads compared to unpaved roads, will behave during a 9.0 seismic event.

Roadways without curbs are concentrated in the western area of the neighborhood, as well as a large segment of Sandy Boulevard in the eastern part of the neighborhood.

existing active transportation infrastructure

The active transportation network is far more developed in Argay than in Parkrose (Appendix A, Map 8). This is especially evident when examining the existing sidewalk network. In Parkrose, sidewalks are primarily located along NE Sandy Boulevard and along NE Prescott Street. South of Prescott, sidewalks are very limited, except at a couple of areas surrounding Parkrose High School and

Parkrose Middle School. Almost all residential streets in Parkrose lack sidewalks. Even in areas with more sidewalk, there are gaps in the network. On the contrary, the majority of residential streets in Argay have sidewalks on both sides of the street. In terms of bicycle infrastructure, the network is fairly underdeveloped in both Parkrose and Argay. NE Shaver Street, NE Prescott Street, and NE Sandy

Boulevard serve as the primary east to west routes. While NE 122nd, NE 112nd, and NE 105th Avenues are the primary north to south connectors. It is important to note, even with lack of current active transportation infrastructure, all paved roads could potentially be utilized for human-powered mobility access in the recovery phase after an earthquake.

portland comprehensive plan policies

The vision from the City of Portland 2035 Comprehensive Plan, adopted by City Council and put into effect in 2018, is a prosperous, healthy, equitable and resilient city where everyone has access to opportunity and is engaged in shaping decisions that affect their lives.¹⁶ The Comprehensive Plan has multiple chapters addressing different topics

of city services. **One of the five guiding principles of the Comprehensive Plan that shape many individual policies and projects focuses on resilience.**

Furthermore, certain policies from the Comprehensive Plan creates an urgency for the Ready Streets project and for future resilient transportation work for neighborhoods and

communities after a seismic event.

There are 15 specific goals and additional policies that support this work. Chapters with relevant public policies include Chapter 2: Community Involvement, Chapter 8: Public Facilities and Services, and Chapter 9: Transportation. The goals and policies are excerpted in Appendix E.

"In our [community] a lot of people are struggling, even without the earthquake."

Parkrose High School Student

10 "Annexation Map" Budget Maps 201314 RSS, accessed May 27, 2019, <https://www.portlandoregon.gov/cbo/article/339545>.

11 "PBOT Equity Matrix" Pdx.maps.arcgis.com, accessed June 02, 2019, <https://pdx.maps.arcgis.com/apps/MapSeries/index.html?appid=2e2252af23ed4be3a666f780cbaddfc5>.

12 "PBOT Equity Matrix" Pdx.maps.arcgis.com, accessed June 02, 2019, <https://pdx.maps.arcgis.com/apps/MapSeries/index.html?appid=2e2252af23ed4be3a666f780cbaddfc5>.

13 "www.oregon.gov," accessed June 2, 2019, <https://www.oregon.gov/ODOT/Planning/Documents/Seismic-Lifelines-Evaluation-Vulnerability-Synthese-Identification.pdf>.

14 Open Street Map, Google Maps, and SAFE Planning observations. NOTE: OpenStreetMap data is open source so it is not always accurate. This data is meant to give the project team an idea of what amenities and assets exist in the neighborhood. Other assets were determined through Google Maps data, on the ground data, and outreach feedback.

15 City of Portland. Transportation System Plan. May 2018. Retrieved 10 March 2019 from <https://www.portlandoregon.gov/transportation/article/690970>

16 "2035 Comprehensive Plan," 2035 Comprehensive Plan RSS, accessed June 03, 2019, <https://www.portlandoregon.gov/bps/57352>.

04 disaster recovery: best practices

Overview

Increases globally in overall population, coupled with the increasing trend of urbanization, mean that more and more people are affected by natural disasters. Increasingly, more researchers and practitioners are considering what type of society we should recover to, and using the opportunity that disasters create as wedge to build a better society. This section discusses the unique challenges of the Emergency Management field including: the definition and importance of community resilience, differing roles of the public sector and local

communities, and nuances for disabilities and natural disasters. This section also presents summarized case studies from five recent, catastrophic seismic events with useful takeaways for the Ready Streets project highlighted. The information presented is drawn from academic research as well as interaction with practitioners working in the field of disaster resiliency.



Figure 7: Highway damage to I-5 as a result of the Northridge Earthquake, January 1994.

Photo: Cooper, James D., Friedland, Ian M., Buckle, Ian G., Nimis, Roland B., & Bobb, Nancy McMullin. (1994). *The Northridge earthquake: Progress made, lessons learned in seismic-resistant bridge design*. *Public Roads*, 58(1), 26.

Recovery Phase

Patterns of Emergency Management are generally illustrated as a continuous cycle, flowing through the phases of Preparedness, Response, Recovery and Mitigation.

The recovery phase, the focus of this project, takes place over varied time periods but generally begins after the response period is over, or when basic life-safety has been stabilized. Recovery does not have a distinct end point and different segments of communities recover at different rates with some communities potentially never meeting the criteria for a full recovery.

As stated by Robert Olshansky, "Recovery is a process, not an outcome."¹⁷ Recovery phase activities might include rebuilding fallen buildings, putting people back to work, planning, and reconstructing infrastructure systems like roads, bridges, and electric grids. It is important to note that,

because of the cyclical nature of disaster management, most of the plans and preparations executed in the recovery phase are written and practiced in the preparedness and mitigation phases.

Often during the recovery period, there is tension between choosing recovery that prioritizes rebuilding quickly over rebuilding something better and less vulnerable to disaster risk; this phenomenon is called 'time compression'. The challenge of planning in the recovery period is to both recover quickly and reduce future risk to disasters. Time compression can exacerbate pre-existing social inequities; those with easier access to capital are able to more fully participate in recovery efforts. Those with less access to capital are subject to slower restoration, which can have cascading effects on different aspects of physical, social, economic, and institutional recovery.

Nonprofit organizations, the private sector, and informal networks are **key partners to government entities in recovery planning**. They often can be more nimble than bureaucratic systems and can tap into international and private funding. While recovery agencies are commonly set up

"Recovery is a process, not an outcome."

- Dr. Robert Olshansky

to streamline governmental bureaucratic processes, non-profit and private partners may produce more localized solutions, permanent change, and lasting partnerships critical to building the capacity of the community.

community resilience

Concepts of Community Resilience

Community resilience, or the ability of a community to bounce back to something better after a disaster, is the foundational concept of the Ready Streets project. Building resilience speaks to the idea of making something better than it was before, as opposed to recovery which is simply getting back to the way things were before the disaster.

Typically, researchers use the state of a community before a disaster as an indicator for building resilience and there is no set bar for “achieving resilience”. Rather, building community resilience after a disaster means **rebuilding the social, economic government, infrastructure, and other pieces of a community with fewer risks to hazards and fewer vulnerabilities for community members.** This is important because community resilience leads to less reliance on resources from agencies which will not function optimally during disasters, and mitigates an area’s “island effect” by knowledge-sharing.

Social capital, another key concept, is the individual links, shared values, and

understandings in society that enable individuals and groups to trust each other and so work together.¹⁸ To have community resilience, all community members, especially populations with more social vulnerabilities, need to have social capital.

Daniel Aldrich, a disaster recovery scholar, states that “high levels of social capital - more than such commonly referenced factors such as socioeconomic conditions, population density, amount of damage or aid - serve as the core engine of recovery”.¹⁹ Aldrich goes on to say that, “The secret to recovery is building social capital - **maintaining and strengthening the social networks that hold the community together**” and recommends that officials “focus on bonding, bridging, and linking relationships- those that draw the community together, provide bridges to other social networks, and link community networks with external resources”.

The concepts of community resilience and social capital are central to creating a neighborhood-level non-motorized transportation

network in Parkrose/Argay. As described in the existing conditions and hazards analysis, Parkrose/Argay have high densities of populations that have historically seen higher vulnerability to disasters in the US and globally (people of color, people with low incomes, and people with limited English proficiency).

The neighborhood faces a significant threat of isolation after a large earthquake due to the surrounding hazards that will likely delay resources coming into the neighborhood, and sever social networks that extend beyond physical neighborhood boundaries.

SAFE Panning strongly recommends that PBOT focus on taking actions that will not just strengthen the physical infrastructure, but that will work towards building a resilient community.

People with Disabilities

People with disabilities are often the most vulnerable in the aftermath of a disaster. SAFE Planning has identified three categories of key lessons to understand the nuances people with disabilities face in disasters: amplified extent and severity of disaster; increased importance of social resilience; and goals in recovery. To ensure that specific needs are met, local government should work with people with disabilities in planning.

People with disabilities are **more likely to experience a disaster**, and when they do they are hit harder.²⁰ Higher likelihood to experience a disaster is due to People with disabilities face a higher mortality rate, particularly when there is a need to evacuate. Rapid onset disasters are especially hard-hitting given the lack of time available to prepare.

Social resiliency is of extreme importance for people with disabilities in disasters. People with disabilities often rely on networks for basic functioning, but also have a **higher likelihood of having smaller social networks**.²¹ Social networks are very

important after a disaster, for communication and meeting basic needs- if people already have a limited network, this means they face increased barriers. Physical mobility is tied in with resiliency. If people have a harder time moving around a city, they literally cannot access the people and spaces critical to their social networks. Liz Hong, a member of the support group Texas Parent-to-Parent and a mother of children with disabilities, refers to a “spiderweb” of interconnected barriers.²²

Goals in recovery for people with disabilities are basically the same as they are for those who do not have disabilities. However, nuances add additional hurdles which complicate recovery. Getting into permanent housing, having one’s transportation system re-established, and financial sustainability are common recovery goals for all who live through disasters. However, people with disabilities have to navigate two different support systems: the disaster support system as well as the disability system.

For example, Medicare is geography-based. Someone displaced after a disaster who is a Medicare recipient must navigate additional **significant bureaucratic challenges** in order to have their basic needs met. Involving disability service providers and people with disabilities in drills and exercises, in addition to planning, ensures that specific needs are not overlooked.²³

Key lessons to understand the nuances people with disabilities face in disasters:

- > Amplified extent and severity of disaster
- > Increased importance of social resilience
- > Goals in recovery

public, community, and government roles

Role of the Public

Research on international disaster management strategies also illuminated the crucial role of involving the public in all phases of the emergency management cycle. Key takeaways from SAFE Planning's research are:

- > Governments should emphasize emergency preparedness and not on the huge scale or inevitability of a disaster; be less fear-inspiring and more productive.
- > Community members will approach situation-based engagement differently depending on their culture, past experience, and vulnerabilities they face every day.
- > It is very difficult to accurately express how a seismic event will impact our daily lives - many people are not aware of the extent of possible damage or what life might look like after a large earthquake.
- > Many people have a very limited understanding of how to act or what to do during or after an earthquake. Varying levels of government trust influenced how people responded. The source of information matters to certain populations.²⁴
- > Values-based scenario planning could be a useful tool when involving the public.²⁵ This project did not have the opportunity or capacity to use this public involvement strategy. However, careful consideration of if scenarios represent the inclination or preference of planners, and not that of the community they are serving, should be kept in mind.²⁶

Role of Non-Profit Organizations

Voluntary Organizations Active In Disasters, or VOADs, are essential partners to government entities in recovery. Religious communities and social support groups are common examples of VOADs. During or after a disaster VOADs benefit from **already having established networks and resources** to utilize. These organizations can act more quickly and nimbly than government in many instances, due to not having such complex bureaucratic processes. Partnerships between VOADs and government can be particularly effective, with communication and resource-sharing helping accomplish shared goals.

Role of Government

Existing research about the recovery of communities and the role of government shows a wide range of responses from different countries. Government response varies from centralized, partly decentralized, and decentralized. Much of the US response management is categorized as decentralized, in which multiple organizations at varying levels of government manage recover, while the federal government provides support and coordination of the recovery.²⁷

Academic research has examined multiple disasters and provided recommendations for government response. Key takeaways include:

- > Use and enhancement of existing systems and structures can promote information flow and collaboration
- > Transparency and information flow are key
- > Planning and acting - find the right balance
- > When budgeting, including costs of communicating and planning and allowing revision of the budget over time leads to more flexibility

case studies of major earthquakes

Earthquakes are not a new phenomenon and there are many global case studies that can give PBOT insight into what impacts to neighborhood-level transportation to expect and how to craft actions that build resilient

communities. The following summarized cases were selected because of their key takeaway lessons and helped inform the recommendations developed for this report.

USA

San Francisco, CA

Date

> October 17, 1989

Richter Scale Magnitude

> 6.9

Epicenter

> 60 miles south of San Francisco in Loma Prieta, California

Key Takeaways

> Considerations for transportation system damages as well as disproportionate impacts on marginalized populations were more strongly examined in the aftermath of the earthquake than they had been previously in California.

Northridge, CA

Date

> January 17, 1994

Richter Scale Magnitude

> 6.7

Epicenter

> San Fernando Valley, California

Key Takeaways

> Notable damage to the freeway system in Los Angeles. Additionally, the Northridge earthquake highlighted the disproportionate effects on marginalized populations.

The California state legislature passed numerous bills following each of these earthquakes, focusing on providing funding for a speedy recovery, and on policies that supported emergency planning. Legislative bills following the Northridge earthquake focused greatly on the repair and seismic retrofitting of automobile facilities but none focused on active transportation.

These earthquakes, and other natural disasters, exposed inequities within emergency management and natural disaster response and recovery in California. A

report prepared by Drexel University in 2009 evaluated California's disaster preparedness with the lens of diversity and inclusion, and found gaps in individual- and institutional-level barriers including: informational coordination across agencies and disaster organizations; spanning geographic scales; creating culturally specific resources and plans; ensuring prepared and flexible financial resources for diverse communities; and improved collaboration between public health/emergency agencies and the broader population.²⁸

New Zealand Canterbury Earthquake (aka Darfield Earthquake)

Both New Zealand earthquakes caused high levels of destruction through repeated aftershocks, leading geotechnical engineers to state, “No city has been liquified 4 times... it’s really unprecedented.” Over half of the commercial buildings in the city center were eventually demolished.²⁹ Aftershocks complicated recovery and reconstruction efforts, lasting for over 1 year after the initial large earthquake. These led to more destruction, and compounded and complicated recovery; Christchurch saw an exodus of around 8,000 (out of 377,000) residents.

This seismic episode affecting Christchurch is often looked to for lessons for the US West Coast. Christchurch is similar to Portland in that it has a similar population size and a river flows through the city center, with an urban park along the banks. It also shares linguistic and dominant cultural roots.

Various non-profit, community, and faith-based groups played key roles in recovery. Groups organized around specific needs and issues to implement projects. Notable examples include The Student Army, a group of University of Canterbury students digging out liquefied properties; The Ministry of Awesome, a group who connect awesome ideas with the resources; Viva, committed to actively promoting sustainable developments for rebuild; Gapfiller, an urban regeneration initiative that temporarily activates vacant sites; and re-START, a container mall housing 50 business built with an interest free loan from the Christchurch Earthquake Appeal Trust.

The earthquake also led to the implementation of neighborhood-level programs to build social resiliency.

Date(s)

- > September 4, 2010
- > February 22, 2011
- > With additional aftershocks

Richter Scale Magnitude

- > 7.1 (2010)
- > 6.3 (2011)

Epicenter

- > 25 miles West of Christchurch (2010)
- > closer to Christchurch (2011), Canterbury New Zealand

Key Takeaways

- > The role of community groups and community-building & vision planning in place before the earthquake hit.

Community cultural pride events helped heal and strengthen local communities. A website was created for residents to enter needs and resources, to organize local events, and to be used as a communication tool for agencies involved in recovery (<https://selwyn.getsready.net/>).

A 2008 Gehl Architects vision plan provided fodder when the need to redesign came up, imparting that it is important to have elements in place to draw upon before disaster hits. The focus on “anchor projects” in the central business district and small grant programs were key aspects of recovery efforts.

Mexico

Date

> September 19, 2017

Richter Scale Magnitude

> 7.1

Epicenter

> ~ 30 miles South of the city of Puebla, the eponymous capital & largest city of its state

Key Takeaways

> Community involvement in rescue efforts and debris removal.

The damage from this earthquake was concentrated in Mexico City, causing the deaths of about 370 people and injury to 3,289. Oddly, this earthquake occurred on the date of the 32nd anniversary of the notorious 1985 Mexico City earthquake which killed 10,000 people.

The collective memory of the 1985 earthquake played a large role in preparedness, response, and recovery. Youth and university communities played a large role in the response phase. Departments at UNAM, a large university, became hubs following the earthquake to provide services such as mental health support from the psychology faculty and students and pet care from the veterinary school. Chains formed for debris clearance and other activities such as passing out water and supplies. A snowball system of arm raising to ask for silence to hear trapped victims was captured in striking photos circulated in international media.

Japan

Date

> March 11, 2011

Richter Scale Magnitude

> 9.1

Epicenter

> ~ 70 km (45 mi) east of the Oshika Peninsula of Tōhoku region

Key Takeaways

> Warning systems, life-saving seismic preparedness for structures, and *bōsai sōgo kyōtei* (mutual disaster assistance agreements).

A strategy worth highlighting is intragovernmental, horizontal partnerships. The Japanese examples drew inspiration from a Chinese effort which was instituted after major earthquakes. The strong central Chinese government created assignments between provinces (and in certain cases, cities), partnering a province affected by the devastation with a province that was not. The partnerships served to help finance recovery efforts as well as share other resources.

After the 1995 Kobe earthquake, grassroots alliances between localities emerged in Japan. These mutual disaster assistance agreements (*bōsai sōgo kyōtei*) were not facilitated by higher levels of government and consisted of pledges of aid such as local government staffers and other relief resources in the case of disaster striking either partner.³⁰ There are now more formalized aid agreements, especially after the crisis of 2011 in the Tohoku region.

Time compression can exacerbate pre-existing social inequities; those with easier access to capital are able to more fully participate in recovery efforts. Those with less access to capital are subject to slower restoration.

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- 20 Pacific ADA Center, "ADA National Network Learning Session: Recovery After Disasters and Individuals with Disabilities - What We Know and What We Do Not," Webinar, facilitated by Lewis Kraus, 14 March, 2019, <http://www.adapresentations.org/webinar.php?id=147>.
- 21 Pacific ADA Center, "ADA National Network Learning Session: Recovery After Disasters and Individuals with Disabilities - What We Know and What We Do Not," Webinar, facilitated by Lewis Kraus, 14 March, 2019, <http://www.adapresentations.org/webinar.php?id=147>.
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- 23 Pacific ADA Center, "ADA National Network Learning Session: Evacuation and Transportation in Emergencies for People with Disabilities," Webinar, facilitated by Lewis Kraus, 28 March, 2013, <http://www.adapresentations.org/webinar.php?id=7>
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- 25 Rawluk, A., Ford, R., & Williams, K. (2018). Value-based scenario planning: Exploring multifaceted values in natural disaster planning and management. *Ecology and Society*, 23(4), 2.
- 26 Arnab Chakraborty & Andrew McMillan (2015) *Scenario Planning for Urban Planners: Toward a Practitioner's Guide*, *Journal of the American Planning Association*, 81:1, 18-29, DOI: 10.1080/01944363.2015.1038576
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- 29 Laurie A. Johnson and Robert B. Olshansky, *After Great Disasters: An In-depth Analysis of How Six Countries Managed Community Recovery*, (Cambridge: Lincoln Institute of Land Policy, 2017).
- 30 Richard J. Samuels, 3.11: *Disaster and Change in Japan* (New York: Cornell University Press, 2013), 154.

05 public involvement

Goals and Objectives

SAFE Planning engaged Parkrose-Argay community members to gather comments, concerns, and questions relating to mobility and earthquake resiliency. Building on the project goals and objectives, the public engagement process aimed to identify important community destinations and

community assets in Parkrose-Argay, reach **out to underserved communities**, and **foster partnerships between community organizations and the Portland Bureau of Transportation (PBOT)**. The objectives that the team wanted to achieve for this process were:

- > Address community post-disaster mobility needs
- > Prioritize connecting the most vulnerable communities to community assets and resources
- > Identify community members that could be willing to work with PBOT in developing a pilot project
- > Connect with religious institutions and other community organizations that are not as involved in neighborhood emergency management processes, in order to form networks and increase social capital
- > Apply the PBOT Equity Toolkit throughout outreach processes

To achieve these goals and objectives, SAFE Planning created an outreach strategy to involve a variety of stakeholders and community members in the Parkrose and Argay neighborhoods to guide project outcomes and recommendations.

The IAP2 spectrum of public participation (inform, consult, involve, collaborate, empower) assisted the team in the development of the strategy.³¹ **Informing, consulting, and involving** were the three interest levels that the project team addressed to supplement research.

Equity Lens

A person's identity, meaning their age, race, gender, sexual orientation, ability, language ability, immigration status, or other demographic identifier should not determine their ability to access, use, or participate in planning for the transportation network or the resources it provides. SAFE Planning intended to include equity as a central piece of all stages of the project. Utilizing the demographic analysis, the project team considered potential disproportionate impacts of an earthquake in the Parkrose-Argay neighborhoods. An important consideration for this project was the possibility of spatial

isolation of communities that have high proportions of traditionally underserved communities. The team made a conscious effort to focus outreach efforts with communities of color and the Limited English Proficiency community (LEP), more specifically the Spanish-speaking and Laotian-speaking communities.

SAFE Planning adapted PBOT's Equity Toolkit within the project and public involvement strategy, which guided the engagement process to be intentional and inclusive.³²

Strategy

phase one

The first phase of public engagement was intended to gather information. SAFE Planning identified key stakeholders who live in, work in, and represent Parkrose-Argay. The team connected with these stakeholders through our client and fellow students at Portland State University who have conducted outreach in Parkrose and Argay. The

stakeholders that were pivotal to the introduction of the project were the Neighborhood Emergency Teams (NETs), youth, community residents, and faith-based organizations. After interviewing stakeholders, the other engagement activities were developed to achieve outreach goals while using the equity lens as a guide.

During this phase, the team also created a website and presented the project to a number of community organizations, including the NETs, two neighborhood associations, and several faith-based organizations.

phase two

The second phase of public engagement included administering a survey, tabling at community events and conducting a series of community conversations. The survey and community conversations were administered in Laotian and Spanish, in addition to English.

Through the survey, SAFE Planning learned about the community's travel patterns and mode share, the accessibility of neighborhood amenities, and neighborhood demographics. The team was

also able to identify major intersections close to survey respondents home to assess the general distribution of residences in the area. The survey results can be found in Appendix D.

The SAFE Planning team tabled at four events to promote the project survey and participatory mapping activity (Table 5).

The largest piece of our engagement strategy were the four community conversations. Ten to 25 participants were presented a

scenario and asked questions about neighborhood assets, support networks, and community resources that could aid in the recovery phase of a disaster. For the conversations, the team **prioritized the NETs and faith-based and community organizations representing underserved communities.** Community conversation were held with the NETs, the Parkrose High School Leadership class, Latino Network, and a citizenship class at the Wat Buddhatham Aram Laotian Buddhist Temple (Figure 8).

phase three

The third phase of public engagement was centered on analysis of the data collected from stakeholder interviews, survey tools, and community conversations. Key takeaways were identified from the survey results. Qualitative coding was used to identify key themes in the community conversation.

phase four

The fourth and final phase of engagement consisted of utilizing public input findings, existing conditions research, and best practices to evaluate policy options and draft the recommendations.

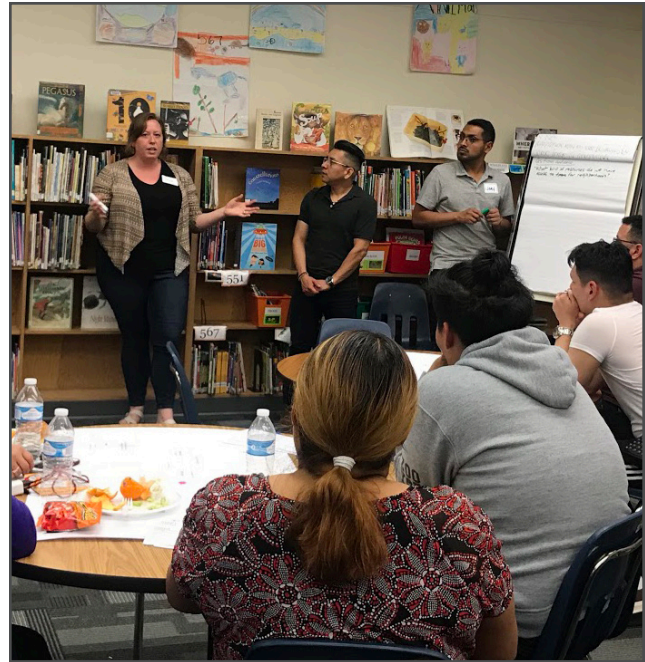


Figure 8: Latino Network Community Conversation

Meeting/Presentation	Location	Date
East Portland Action Plan Meeting & Presentation	East Portland Neighborhood Office	2/27/19
Argay Terrace Neighborhood Association Meetings	Fire Station #2	3/19/19
Parkrose Neighborhood Association Meeting	Russellville Grange Hall	3/19/19
NET Presentation and Community Conversation	Russellville Grange Hall	3/26/19
Parkrose High School Community Conversation	Parkrose High School	4/10/19
Parkrose High School Tabling	Parkrose High School	4/10/19
Xtra Years of Zest Presentation and Tabling	St. Therese Church and School	4/10/19
Laotian New Year	Wat Buddhatham Aram Laotian Buddhist Temple	4/13/19
St. Matthew's Anglican Church Presentation	St. Matthew's Anglican Church	4/14/19
Latino Network Community Conversation	Shaver Elementary School	4/25/19
New Year Festival Tabling	Glenhaven Park	4/28/19
Laotian Community Conversation	Wat Buddhatham Aram Laotian Buddhist Temple	5/4/19

Table 5: Public Involvement Events

Community Input Findings

survey results

Who Responded

A total of 73 community members responded to the survey, which was administered in English, Laotian, and Spanish. Nearly half of all respondents (35) live outside of the study area (see Appendix D). For the proportion that lives within the study area, the majority reside in Parkrose. The vast majority of respondents live in single-family or detached

homes and are homeowners. Thirty-nine percent of the respondents were white and 29% of the respondents were Hispanic or Latino. Sixty-one percent of the respondents identified as female and thirty-nine percent identified as male. The majority of respondents make less than \$60,000 a year, with nineteen percent making between \$61,000 and 40,000, twenty-

two percent making between \$21,000 and \$40,000, sixteen percent making less than \$20,000, and five percent with no income. Two-thirds (sixty-seven percent) of the respondents fell in the 36-45 age range.

Key Takeaways

One of the primary takeaways from the survey is that the Parkrose and Argay community is **car-dependent**. The vast majority of respondents take a car, truck or motorcycle to get to all their destinations. Key destinations such as grocery stores, schools, and religious institutions may not be within a comfortable walking and rolling distance.

According to our results, respondents are more likely to travel for longer amounts of time (20-30 minutes and more than 30 minutes) to get to religious services, work or school, or doctor's offices/ medical care. The survey results demonstrated that transit users are more likely to take transit for longer amounts of time (20-30 minutes and 30 minutes or more). Respondents were

also far **more likely to walk to destinations that involved a short traveling time**, between only 5 and 20 minutes away. This indicates that respondents are more likely to walk to a destination if it is less than 20 minutes away. This could translate to $\frac{3}{4}$ of a mile to a mile, depending on walking speed.

community conversations

Laotian Community Conversation

Since the Laotian Community Conversation took place after the team's internal engagement deadline and the team had already begun to analyze data to formulate recommendations, the team decided to use different questions in the event program (see Appendix C). Based on the feedback the team received, it appeared that a lot of the Laotian community members often function as an extended family rather than as a

household. This indicates that there is a **need to examine the social dynamics of different cultural groups in a community**. The Laotian community was also interested in recovery resources to have at home, and how to store water, food, medicine. This aligns with the theme of supported self-sufficiency that emerged out of the other Community Conversations.

Coded Public Input

In order to analyze the community conversations and the responses to questions the team received at tabling events, SAFE Planning coded the public input from community conversations with Latino Network, the Parkrose High School leadership class and the NET. Five themes emerged out of the coding process, and the team believes that these themes connect and relate to the majority of the input. The five themes are: knowing neighborhood assets and partnership

opportunities, ensuring equitable access to resources, alternative methods to moving goods and people around, supported self-sufficiency through education and communication, and earthquake safe infrastructure that people can use every day (Figure 9).

Public Input Themes



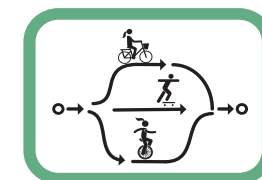
*Self-Sufficiency
Through Education
and Communication*



*Knowing Neighborhood
Assets and Partnership
Opportunities*



*Equitable Access to
Resources*



*Alternative Methods
to Moving Goods
and People Around*



*Earthquake-Safe
Infrastructure that
People Can use
Everyday*

Figure 9: Coded public input themes.

Self-Sufficiency Through Education and Communication

At many of the project's engagement events, people indicated that addressing language barriers by reaching out to limited English proficiency communities and providing emergency education and communication in multiple languages would help improve self-sufficiency in the community. The Latino Network participants indicated that emergency education events could also educate the community about how to clean debris off the

street, administer basic first aid, and how to utilize other resources.

Another significant takeaway from the team's interactions with community members at community conversations and tabling events is the view that there is a lack of resources in the community. There is a general feeling that the independent preparedness that the City promotes (NET Teams, emergency kits) is not

accessible to all communities who do not have the means to purchase emergency kits and have the time to be part of a NET team. Less privileged communities, which are often communities of color in Portland, are less likely to have extensive training and access to supplies. It is important to look at other ways to give communities access to important resources and knowledge.

Knowing Neighborhood Assets and Partnership Opportunities

There was a general consensus among at the engagement events that it would be beneficial to make a map of assets in the community. A lot of community members expressed that local schools, churches, and parks could be great community gathering spaces after a disaster. These places could be nodes for communication and resource distribution.

Another significant takeaway from the community conversations was that there is a wealth of opportunity for partnership in the community. For instance, faith-based organizations are prominent in the community and some of the leaders expressed that they would be interested in partnering with government agencies to host emergency preparedness events. Public service providers could also give these existing

networks community capacity building tools to facilitate a response to a disaster. Utilizing organizations in the area that already bring communities together is a way to give the Parkrose and Argay community a more community-focused alternative to preparedness.

Equitable Access to Resources

Many of the participants indicated that they thought people living with disabilities, people with health issues, the elderly population and people with Limited English Proficiency (LEP) would be the most vulnerable after

an earthquake. It is critical that language barriers are addressed and that emergency communications and education be translated into the common languages in the Portland community.

Alternative Methods to Moving Goods and People

At the Parkrose High School community conversation, a few of the students suggested that bikes, skateboards, and other human-powered means of transportation could be used to move debris off the roads and bring supplies to community members. At the

NET community conversation, some other means that were mentioned were wagons, wheelbarrows, strollers, and cargo bikes. At the Latino Network community conversation, there was a general consensus that most people would walk or run to

get to important destinations after a major disaster. Overall, a lot of creative ideas for moving people and goods around emerged out of these conversations.

Earthquake-Safe Infrastructure that can be used every day

Several participants at the community conversations discussed investments in earthquake-safe structure that could be used in the recovery phase of a disaster. For example, signals on rigid

supports could be used for everyday traffic. These types of investments are a way of keeping earthquakes in mind for future improvements in the area.

mapping activity

When asked to define key destinations after an earthquake in the Parkrose and Argay neighborhoods, community members responded with almost **40 different locations**. There was significant overlap in some locations community members indicated as one of the first places they would go for help or resources after an earthquake. These places included Parkrose High School, Parkrose Middle School, Rossi Farms, Luuwit View Park, and WinCo Foods (Figure 10). Participants indicated that Parkrose High School, Parkrose Middle School, and a number of churches are important meeting spaces in the

community so they could be good **places to gather after an earthquake and distribute supplies**. The sites also represent **social networks that could be utilized** to build community capacity.

Participants voiced that the Rossi Farms and Luuwit View Park would be suitable as gathering spaces after an earthquake because they are large open areas. There were a number of other parks in the vicinity, including Knott Park, Argay Park, and John Luby Park, that were mentioned two to three times. Several participants indicated that they would go to WinCo Foods, and

number of other grocery stores including Hong Phat Market and Costco, because these places would have a lot of resources, such as food, water, and equipment. Some participants mentioned that grocery stores could also function as **shelters after an earthquake**. Other notable destinations include hotels, fast food restaurants, churches, and Fire Station 30.

Although WinCo Foods and many other destinations that were named are outside of the study area boundary, these destinations were still considered in our analysis because they are significant to the community.

Public Engagement Reflection

SAFE Planning focused on engagement with communities to rebuild trust and overcome barriers built by years of superficial, tokenistic engagement from government officials. With help from the Latino Network, the team was successful in making connections with Parkrose-Argay's Spanish-speaking community. The team attempted to make connections with the Vietnamese-speaking

community in Parkrose and Argay, but despite good intentions, we lacked an introduction to community to be able to successfully follow through.

However, we were able to make a connection with the Laotian community at the Wat Buddhatham-Aram Lao Temple. We made the choice to redirect efforts from the Vietnamese community and hold our community

conversations with the Laotian-speaking community instead.

Successful disaster recovery hinges on community-level engagement and involvement from the whole community, including English speaking and LEP populations; private businesses, nonprofits, and governments. SAFE Planning sees the lack of connections between the PBOT planning team and local communities

as a major barrier to future disaster recovery efforts. To combat this, the team strongly recommends that the PBOT planning team work diligently in the future to promote community leadership and foster connections with key people and organizations that serve LEP populations.

Another limitation in the process has been our lack of outreach to the disability community. Although SAFE Planning incorporated

research on disability in disasters and used an equity lens for the public involvement strategy, there was not enough time to make connections to engage the community of people with disabilities. This community faces different barriers to engagement than LEP communities; one significant barrier is that people with disabilities are often isolated due to physical access restrictions and social stigma. Our team found it

very difficult to identify which local community groups we should reach out to and had little success in reaching people with disabilities. SAFE Planning acknowledges this is a major shortfall of our project and strongly recommend that in the future, PBOT consult with people with disabilities and the organizations that serve them before implementing any of the recommendations that we suggest.

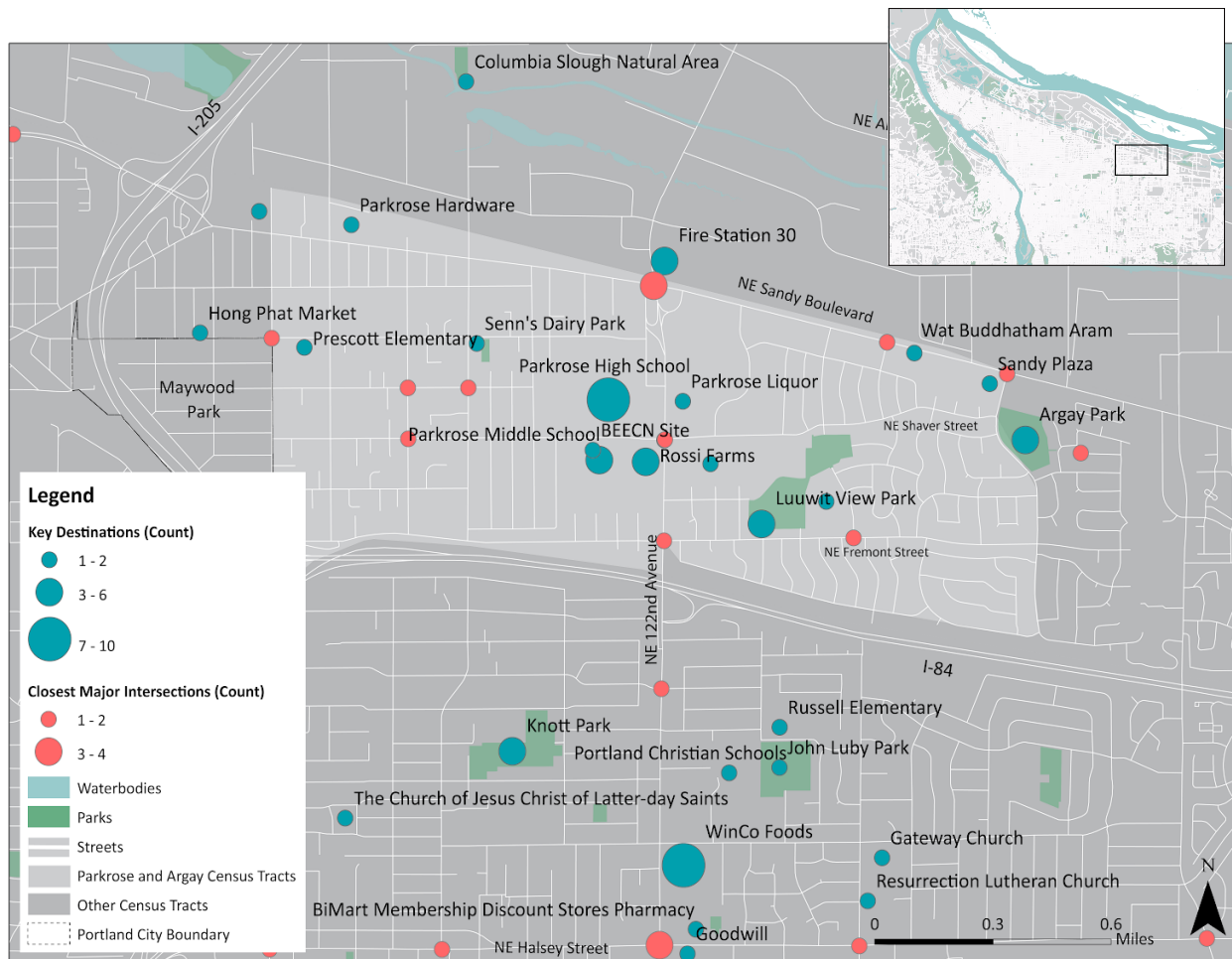


Figure 10: Key destinations and nearest major street intersections to survey respondents homes

*Successful disaster recovery hinges
on community-level engagement and
involvement from the whole community.*

31 "122nd Ave Plan: Safety, Access and Transit," 122nd Ave Public Involvement Plan Safety Access and Transit RSS, accessed June 03, 2019, <https://www.portlandoregon.gov/transportation/76937>.

32 "(PBOT) FIVE YEAR RACIAL EQUITY PLAN - Portland, Oregon," accessed June 3, 2019, <https://www.portlandoregon.gov/oehr/article/622531>.

06 | recommendations

This section details our recommended actions for PBOT to build a resilient, neighborhood-level mobility network. The framework below is based on the understanding of resilience established in the research section of this report and is intended to guide PBOT's future decision making around neighborhood-level resilience. The framework is extended to **identify recommended actions for each key piece of a neighborhood-level transportation network** as well as examples of what implementation could look like in the the Parkrose/Argay neighborhood.

The recommended actions were compiled from lessons learned through the research and public involvement phases of this project as well as on what we think is feasible for PBOT to take on in the future.

Equity & Inclusion

A person's identity, meaning their age, race, gender, sexual orientation, ability, language ability, immigration status, or other demographic identifier should not determine their ability to access, use, or participate in planning for the transportation network or the resources it provides. The recommendations outlined below were written based on information we learned from our research and public involvement processes and are designed around equity principles. We purposefully did not add in recommendations that call out equity because we believe equity should always be included as a central piece of every action and not as an afterthought or addendum.

Resilient Transportation Framework

A neighborhood-level transportation network should have these key pieces to create holistic resiliency:

Resilient physical infrastructure

Resilient physical infrastructure is a key piece in the ability of the network to bounce back. A resilient physical infrastructure is seismically sound and built to mitigate the risks of the hazards that threaten it.

Diversified uses of the network

A neighborhood-level resilient transportation network should include infrastructure for multiple modes and access, prioritizing pedestrian and “rolling” activities like biking and personal mobility devices.

Increased capacity and capability of community

In order to be resilient, a transportation network needs to be able to recover to a usable state quickly. Having diversified uses and resilient infrastructure helps the network recover quickly, but a neighborhood also needs local people with decision making and leadership capacity to be invested in supporting recovery efforts.

Delegated local decision making power

Actions like demographic analyses of neighborhoods and translating materials into other languages are needed to plan for a community, but strategies need to go deeper into transferring decision making, planning, and funding ability to the local level.

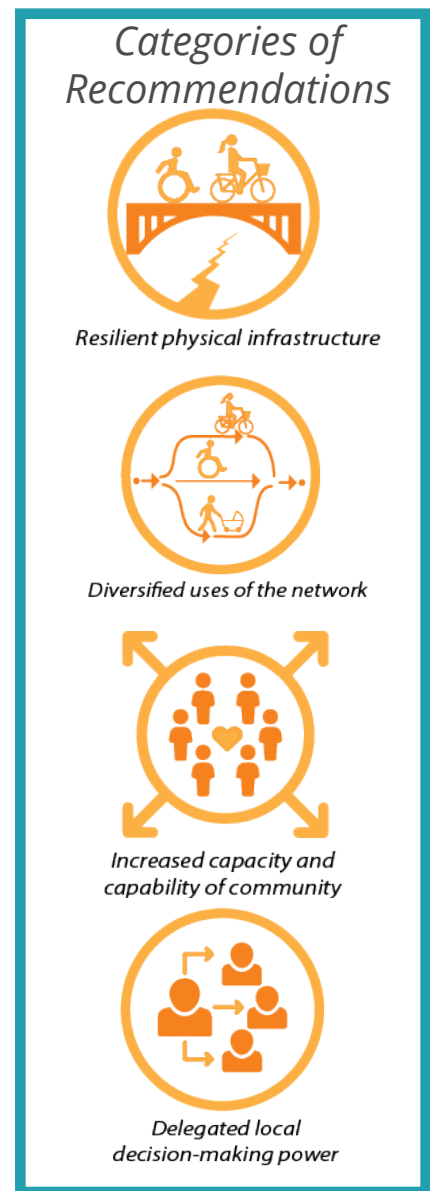


Figure 11: Recommendations for a resilient transportation framework

To form Recommendation Categories 2, 3, and 4, SAFE Planning designed recommendations based on the wants and need of the community based on feedback from our public involvement activities. For Category 1, which focuses on structural interventions, we drew from research and our team’s experience. It should be noted that none of our team are structural engineers or have specific technical expertise in transportation infrastructure. These recommended actions are meant to start a conversation at PBOT about seismic resilience of infrastructure.

Element	Recommended Action	Lead	Support
1. Resilient Infrastructure			
1.1	Seismically retrofit the I-84 overpass bridge at NE 122nd Avenue	ODOT	PBOT
1.2	Improve pedestrian and bicycle facilities on the NE 102nd Avenue bridge over I-84	PBOT	ODOT
1.3	Sink I-84 to below grade level while improving at-grade street connections	PBOT	ODOT, MCDSCS
1.4	Build a multi-use bridge for improved pedestrian and bicycle connections at NE 132nd Avenue	PBOT	ODOT, MCDSCS
1.5	Ensure that human-powered mobility considerations are integrated into updates to the ETRs	RDPO	PBOT, MCEM, ODOT, MCDSCS
2. Diversified Uses of the Network			
2.1	Install wayfinding signage	PBOT	PBEM
2.2	Install recovery information and maps at current transportation hubs	TriMet	PBOT, PBEM
2.3	Write a neighborhood-level plan identifying prioritized human-powered mobility routes	PBOT	MCEM, PBEM
3. Increase Capacity and Capability of the Community			
3.1	Fund and co-host neighborhood events	PBOT, CPs	PBEM
3.2	Facilitate partnerships for peer-to-peer knowledge sharing	OCCL	PBEM
3.3	Use existing PBOT projects, programs, and partnerships to dispense disaster preparedness and recovery info	PBOT	PBEM
3.4	Make micro-investments in supplies that help people move themselves and goods without motorized transport	PBEM	PBOT, CPs
3.5	Create a fund to translate and interpret disaster preparedness and recovery	PBEM, MCEM	PBOT
3.6	Work with community partners and PBEM to use and distribute the Community Resilience Workbook	PBEM	PBOT, CPs
3.7	Fund disaster resilience community liaison positions within PBOT	PBOT	PBEM, MCEM, CPs
4. Delegate Local Decision-making Power			
4.1	Create a PBOT-matched grant fund	PBOT	CPs
4.2	Plan for Community Rebuilding Recovery Corporations	MCEM	PBEM, DCHS
4.3	Plan with the Whole Community	PBOT	CPs

CPs- Abbreviation for Community Partner
PBOT - Portland Bureau of Transportation
PBEM - Portland Bureau of Emergency Management
ODOT - OR Department of Transportation

MCEM - Multnomah County Office of Emergency Management
OCCL - Office of Community and Civic Life
DCHS - Multnomah County Department of County Services
MCDSCS - Multnomah County Dept. of Community Services

Prioritizing Recommendations

As PBOT moves into the new field of disaster resiliency planning, we suggest prioritizing actions that build social resilience concurrently with disaster risk reduction strategies. Strategies like seismically upgrading roads, bridges, and pedestrian crossings are critical to reducing disaster risk for East Portland neighborhoods like Parkrose-Argay, but often take decades to complete, come with multi-million dollar price tags, and require political buy-in. Prioritizing projects that focus on social resilience will be the best use of PBOT's resources and position as a local governmental bureau. We recommend a three-tiered system:

- > Tier 1: within 1-2 years
- > Tier 2: within 5 years
- > Tier 3: within 10 years

1 | Resilient Infrastructure Recommendations



1.1 Seismically retrofit the I-84 overpass bridge at NE 122nd Avenue

In this neighborhood, the I-84 overpass bridge that crosses NE 122nd Avenue is likely to collapse in an earthquake and will cut off one of the main arterial streets used to move in and out of the neighborhood. PBOT should partner with

ODOT to prioritize seismically updating this bridge as aligns with goals identified in the transportation section of the Oregon Resilience Plan.³³ We recommend this as a “short-term” solution, to be implemented in the next 10 years.

Lead: Oregon Department of Transportation (ODOT)
Support: PBOT, Multnomah County Department of Community Services (MCDCS)
Idea Source: Oregon Resilience Plan

1.2 Improve pedestrian and bicycle facilities on the NE 102nd Ave bridge over I-84

NE 102nd Avenue is the only PBOT-owned right-of-way that crosses I-84. This connection will be crucial for residents to access services and resources

south of I-84. Improvements should include sidewalk widening to encourage walking and rolling.

Lead: PBOT
Support: ODOT
Idea Source: Ready Streets public input

1.3 Sink I-84 to below grade level while improving at-level street connections

Sinking, but not burying, I-84 between NE 102nd and NE 148th Avenues will provide more at-grade street connection opportunities for Parkrose and Argay residents to access facilities and resources south of I-84. Additionally, this will allow PBOT to immediately improve pedestrian facilities at NE 122nd Avenue, one of the few City-owned right-of-ways that provides a north-south connection. We have identified this recommendation as a long-term solution that could be implemented in the next 50 years.

Lead: PBOT
Support: ODOT, MCDACS
Idea Source: Oregon Resilience Plan

1.4 Build a multi-use bridge for improved pedestrian and bicycle connections at NE 132nd Avenue

There are no north-south connections between NE 122nd and NE 148th Avenues, over 25 blocks. This connection would connect city-owned, developed right-of-way at NE 132nd Avenue to the facilities and resources to the south of I-84, such as Health Center at the University of Western States, which is immediately adjacent to NE 132nd Avenue to undeveloped right-of-way at NE 132nd Avenue on the northside of I-84.

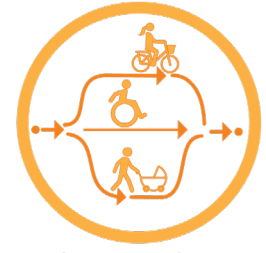
Lead: PBOT
Support: ODOT, MCDACS
Idea Source: Oregon Resilience Plan

1.5 Ensure that human-powered mobility considerations are integrated into updates to the Regional Emergency Transportation Routes

Previous updates to ETRs were focused on movement of automobiles through the region. Since these roadways will be prioritized for debris removal, they will also support mobility for those using human-powered mobility. Further analysis of safety considerations, such as intersection crossings, are needed. Without additional measures, people using the ETRs for human-powered mobility will be subject to the same safety hazards faced in roadways without active transportation facilities during non-disaster conditions. Subsequent ETR updates should also consider network connectivity for important local human-powered mobility corridors.

Lead: Regional Disaster Preparedness Organization (RDPO)
Support: PBOT, ODOT, MCDACS, Multnomah County Office of Emergency Management (MCEM)
Idea Source: Oregon Resilience Plan, Oregon Recovery Conference, Multnomah County Natural Hazards Mitigation Plan, City of Portland Comprehensive plan

2 | Recommendations to Diversify Uses of the Network



2.1 Install wayfinding signage for navigation to post-disaster information hubs

The idea of wayfinding signage takes inspiration from the very successful Tsunami warning wayfinding signage implemented on the Oregon coast. Distances could be displayed in minutes to travel on foot and would benefit both residents and visitors in the area. Signs could direct people to the BEECN (Basic Earthquake Emergency Communication Node) sites or other predetermined meeting and communication sites and could be displayed in walking minutes. Before implementing this recommendation, PBOT should consult with LEP community groups to ensure that signs are in languages that commonly occur in the neighborhood.

Lead: PBOT
Support: PBEM
Idea Source: Coastal Resilience Plan, Oregon coast Tsunami preparedness efforts, Ready Streets public input

2.2 Install recovery information and maps at current transportation hubs

Using the places that people already frequent to display maps and information would elevate awareness of the existing recovery infrastructure (Figure 12). In the Parkrose-Argay neighborhood this could be done by displaying recovery information at transit stops and on buses and trains, and would bring a daily, passive awareness of disaster preparedness and planning efforts.

Lead: TriMET
Support: PBOT, PBEM
Idea Source: Ready Streets public input



Figure 12: Sample of Recommendation 2.2, installing recovery information and maps at current transportation hubs.

2.3 Write neighborhood-level plan identifying prioritized human-powered mobility routes

A plan for connected networks would outline the routes that are likely to be safe for non-motorized travel, and those that will be closed to motorized traffic. This type of map could be distributed to neighbors to identify where to prioritize debris clearing efforts in the first weeks

after a disaster. In the map below, we have identified the routes we recommend to be prioritized as non-motorized traffic only after a disaster. A key factor in determining these routes is based on the liquefaction impact from the Columbia River on these neighborhoods.

Lead: PBOT- Planning Team
Support: MCEM, PBEM
Idea Source: Ready Streets public input, expert consultation



Figure 13: Recommended Resiliency Corridors for human powered mobility use after a disaster. Source: PBOT

The routes in Figure 13 were determined based on a compilation of hazard risks in the neighborhood and priority destinations from our public involvement process.

The hazard risks we overlaid on this map include: soil liquefaction, unreinforced masonry, floods, landslide, and water main infrastructure. The main hazard risk in Parkrose-Argay is soil liquefaction;

the 'Highest Priority' routes were chosen because they provide connections through the neighborhood but are not within the liquefaction zone. 'Secondary Priority' routes also provide connections throughout the neighborhood, but have a higher associated risk and may not be as good of an investment to begin with.

3 | Recommendations to Increase Capacity & Capability of the Community

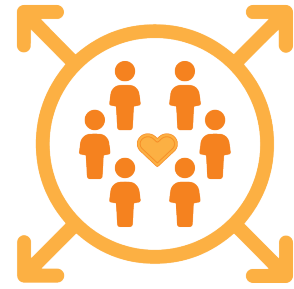


Figure 14: Intersection paintings are an example of ways to implement Recommendation 3.1. Photo: Greg Raisman, PBOT

3.1 Fund and co-host neighborhood events & neighborhood investment projects with partner community organizations

In the Parkrose-Argay Neighborhood, PBOT could work with the Wat Buddhatam Aram Temple to host the annual New Year's celebration that draws over 500 people. Partnering with community organizations to host community events will help people get to know their immediate, geographic neighbors, expanding their social networks and helping start conversations about disaster preparedness and how people would get around in their neighborhood. Working together builds trust between the community and PBOT, giving the community the opportunity to meet PBOT employees and connect with them on a human level. Furthermore, these events could encourage the

community to take account of their neighborhood's social and physical assets through a language skills and tool inventory.

Investment in placemaking strategies translates directly into an investment in building social capital by providing opportunities for neighbors to get to know one another through a common connection with a geographic space. Intersection and crosswalk paintings can also be used as a strategy to identify important, predetermined geographic locations in the neighborhood; intersections can be used as meeting spots, resource drop or pickup locations, or communication spots (Figure 14).

Lead: PBOT/Community Partners

Support: PBEM

Idea Source: Ready Streets public input, compiled resiliency research

3.2 Facilitate horizontal partnerships for peer-to-peer knowledge sharing

This recommendation is inspired by efforts in Japan and China for government staff after major earthquakes. In Japan, reciprocal relationships were formed prior to a disaster taking place, with local or regional governments agreeing to send staff and/or other resources to the partner region if a disaster struck. In Portland this program could be for City staff, but it also could be at the neighborhood-

level for community leaders. Partnerships could be with other places in the country, or world, which face comparable seismic risks. These partnerships have the potential to be more than transactional; staff or community leaders stationed elsewhere are able to bring back knowledge from their experience working through disaster recovery elsewhere.

Lead: Office of Community and Civic Life

Support: PBEM

Idea Source: Research on global post disaster response efforts

3.3 Use existing PBOT projects, programs, and partnerships to dispense information about disaster preparedness and recovery

This recommendation addresses the need for cooperation among City Bureaus and within disparate PBOT programs, especially the Portland Bureau of Emergency Management (PBEM). PBOT should also collaborate with the already established programs and ongoing projects within its own departments to

communicate information such as: Portland in the Streets, Safe Routes to School, PedPDX, Biketown, Vision Zero, SmartTrips, Sunday Parkways, Ten Toe Express Walks, Portland By Cycle, and others. Disaster preparedness, recovery planning, and investments in resiliency should be a part of all PBOT programs.

Lead: Existing PBOT programs
Support: PBEM, Community Partners
Idea Source: Ready Streets public input, expert consultations

3.4 Make micro-investments in supplies that help people move themselves and goods without motorized transport

Cargo bikes are the most flexible option, but small wagons, carts, or trailers could also be good alternatives. These resources should be securely stored in

the community, and should be free for people to access in the disaster recovery phase. Placing these mobility resources within or near BEECN caches is encouraged.

Lead: PBEM
Support: PBOT, Community Partners
Idea Source: Ready Streets public input

3.5 Create a fund to translate and interpret disaster preparedness and recovery materials into other languages

Translation and interpretation of documents should not be an afterthought but can be very expensive. PBOT should consider the cost of translation and interpretation as a central step in disaster recovery planning and could create a fund to support translation and interpretation costs.

Lead: PBEM, MCEM
Support: PBOT
Idea Source: Ready Streets Community Partners

3.6 Work with community partners and the Portland Bureau of Emergency Management to use and distribute the Community Resilience Workbook

Developed in conjunction with Voz, APANO and LatinoNetwork, the Community Resilience Workbook is an interactive document that guides community members through preparing their homes and families for disasters.

Lead: PBEM
Support: PBOT, Community Partners
Idea Source: Community Partners, PBEM Staff

3.7 Fund disaster resiliency community liaison positions within PBOT

Hiring culturally specific community liaisons builds the capacity of PBOT to connect and provide education and outreach to communities. These positions must be funded positions, as opposed to volunteer positions, and should provide all of the opportunities for

advancement and support within PBOT offered to other positions of the same employment category. This strategy should be paired with a full or part time staff member at PBOT to coordinate resources and needs of the disaster community liaisons.

Lead: PBOT
Support: Community partners, MCEM, PBEM
Idea Source: Community partners, Ready Streets **public input**

4 | Delegated Local Decision-Making Power



4.1 Create a PBOT-matched grant fund to subsidize the costs of neighborhood-level disaster recovery/preparedness projects

Investments in building community capacity are equally as important as investing directly in resources. SAFE Planning recommends that PBOT work with a local donor or non-profit preparedness organization to fund a grant for communities to subsidize the costs of neighborhood level disaster preparedness and recovery projects.

The disaster recovery stakeholder advisory committee (explained below) could preside over this grant and run the application and selection process with PBOT oversight and an equity lens. This type of localized grant funding for preparedness and recovery projects would help communities identify and fund solutions to the specific challenges they face.

Lead: PBOT

Support: Community partners

Idea Source: Community partners, Ready Streets public input

4.2 Plan for Community Rebuilding Recovery Corporations

In researching global case studies, our team was impressed by the idea of Community Rebuilding Recovery Corporations. These are essentially pop-up corporations that put people to work after a disaster within a few days, to do tasks such as clear debris. These corporations pay cash for work done on the spot, allowing people to earn money and restarting the local economy while also discouraging long-distance relocation.

The team envisions PBOT planning for and implementing this type of program at the neighborhood-level to help organize route clearance and debris management. This program would address many issues that are present in neighborhoods after disasters including: psychological effects of people feeling useless; spontaneous volunteer management; a stalled economy and depressed local business; overburdened emergency and

utility workers; and a broken transportation system.

PBOT planners can work with the above established task force to write plans for this type of pop-up program as well as debris clearance and management and non-motorized route prioritization plans.

Lead: MCEM

Support: PBEM, PBOT, Multnomah County Department of County Services (DCHS),

Idea Source: Research on global post-disaster recovery strategies



Figure 15: Community members participate in Community Conversations.

4.3 Plan with the whole community

One of the most effective ways PBOT can plan with the “whole community” is by convening an ad-hoc stakeholder advisory committee. This should be made up of community members who represent culturally specific communities within the neighborhood and the committee should have real decision making power to spend allocated monies and implement strategies; PBOT should be an equivalent stakeholder on the committee and not the decision-making force.

Participants should be compensated as experts and offered other participant support such as child care and language translation to remove barriers to their participation. If a grant program is funded, as recommended above, this committee should be in charge of the grant selecting and awarding process.

Lead: PBOT

Support: Community partners

Idea Source: Community partners, Ready Streets public input

Prioritized Recommendations for Parkrose-Argay

Tier 1 Recommendations (First 1-2 Years)

The next steps for this project would be for PBOT to do a pilot implementation in Parkrose-Argay by implementing some of our top recommendations. The first tier of actions should be to build the decision-making

and funding power of the neighborhood. Addressing this need first will create a foundation on which to build all other recommendations. These steps might be:

- >Recommendation 4.3: Creating a stakeholder advisory committee (SAC) for the neighborhood to help advise PBOT on implementing priority resiliency projects as well as guiding the neighborhood level grant funding process.
- >Recommendation 4.1: Create a grant fund to support projects implemented at the neighborhood-level and delegate oversight of the grant selection process to the stakeholder advisory committee.
- >Recommendation 3.7: Create and fund disaster resilience liaison positions within PBOT to work with culturally specific communities and support the work of community partners.
- >Recommendation 3.1: Fund/co-host a few neighborhood events and/or neighborhood investment projects (like intersection painting) to start building trust within the community.
- >Recommendation 1.5: Work with the Oregon Department of Transportation and the Regional Disaster Preparedness Organization to ensure human-powered mobility considerations are integrated into updates to the Emergency Transportation Routes happening in 2019-2020.
- >Recommendation 3.3: Use existing PBOT projects, programs, and partnerships to dispense information about disaster preparedness and recovery. Work closely with the Portland Bureau of Emergency Management to ensure maximum use of City resources.

Tier 2 Recommendations (Within 2-5 years)

The next steps for PBOT would ideally be to present the disaster recovery stakeholder task force with priority projects for funding at

the neighborhood-level while working within its own bureau to prioritize funding for larger infrastructure projects Some of the first projects could be:

- > Recommendation 2.3: Write a neighborhood-level plan identifying prioritized human-powered mobility routes.
- > Recommendation 2.1: Install wayfinding signage to dedicated post-disaster information sites and use the existing transportation assets to communicate disaster-recovery information (Recommendation 2.2).
- > Recommendation 3.6: Work with community partners and PBEM to use and distribute PBEM's Community Resilience Workbook, a "train-the-trainer" approach to communicating disaster resiliency to LEP communities.
- > Recommendation 3.4: Make micro-investments in assets like cargo bikes and community emergency supplies.
- > Recommendation 3.5: Create a fund to translate and interpret disaster preparedness and recovery materials into other languages

Tier 3 Recommendations (Within 5-10 years)

- > Begin the process to seismically retrofit the I-84 overpass bridge at NE 122nd Avenue (Recommendation 1.1)
- > Begin the process to improve pedestrian and bicycle facilities on the NE 102nd Avenue bridge over I-84 (Recommendation 1.2).
- > Write a plan for Community Rebuilding Recovery Corporations at the neighborhood and possibly the City-level (Recommendation 4.2).

33 "www.oregon.gov," accessed June 2, 2019, https://www.oregon.gov/oem/Documents/Oregon_Resilience_Plan_Final.pdf.

07 | next steps

Expanding Ready Streets

While this project focused on the Parkrose and Argay neighborhoods, the process used throughout is replicable to a degree with other neighborhoods. This neighborhood-level approach to community resiliency is crucial for recovery. SAFE Planning suggests the following process:

1. Identify neighborhood
 - > Prioritize equity and partnerships
2. Hazards analysis and research on existing conditions
 - > Research the history of the area, demographics, local infrastructure
3. Engage with the community to understand their needs, capacity, and assets. Question and examine:
 - >What strengths exist?
 - >What do people want?
 - >What is the capacity to lead, make decisions, or implement programs within the community?
 - >What hazards exist?
 - >Who do they affect?
 - >What is the state of transportation infrastructure? How old is it? Is there new technology or new knowledge that could make it safer?
4. Create place-based recommendations with the community
 - >Create recommendations based on feedback through community engagement of residents and people who frequent the neighborhood; take special care to emphasize diversity and equity
 - >Implement place-based recommendations through process-based recommendations regardless of neighborhood

Partnerships

While our team's recommendations are mainly written for the Portland Bureau of Transportation (PBOT), most recommendations encourage PBOT to partner with, support, and, in some cases, hand-over decision making and spending control to community level leaders. SAFE Planning hopes that community partners will also use this document to work with PBOT to achieve the outcomes outlined by community members in our public involvement process.

PBOT will also need the support of other City, County State, and Regional entities like the Portland Bureau of Emergency Management, the Multnomah County Office of Emergency Management, The Oregon Department of Transportation, the Regional Disaster Preparedness Organization, the Office of Neighborhood and Civic Life, Neighborhood Associations, and many, many more. We encourage PBOT and other entities to combine efforts and resources to implement the recommendations outlined in this report and work towards resilient neighborhoods.

08 Appendices

Appendix A: Maps

Appendix B: Demographics

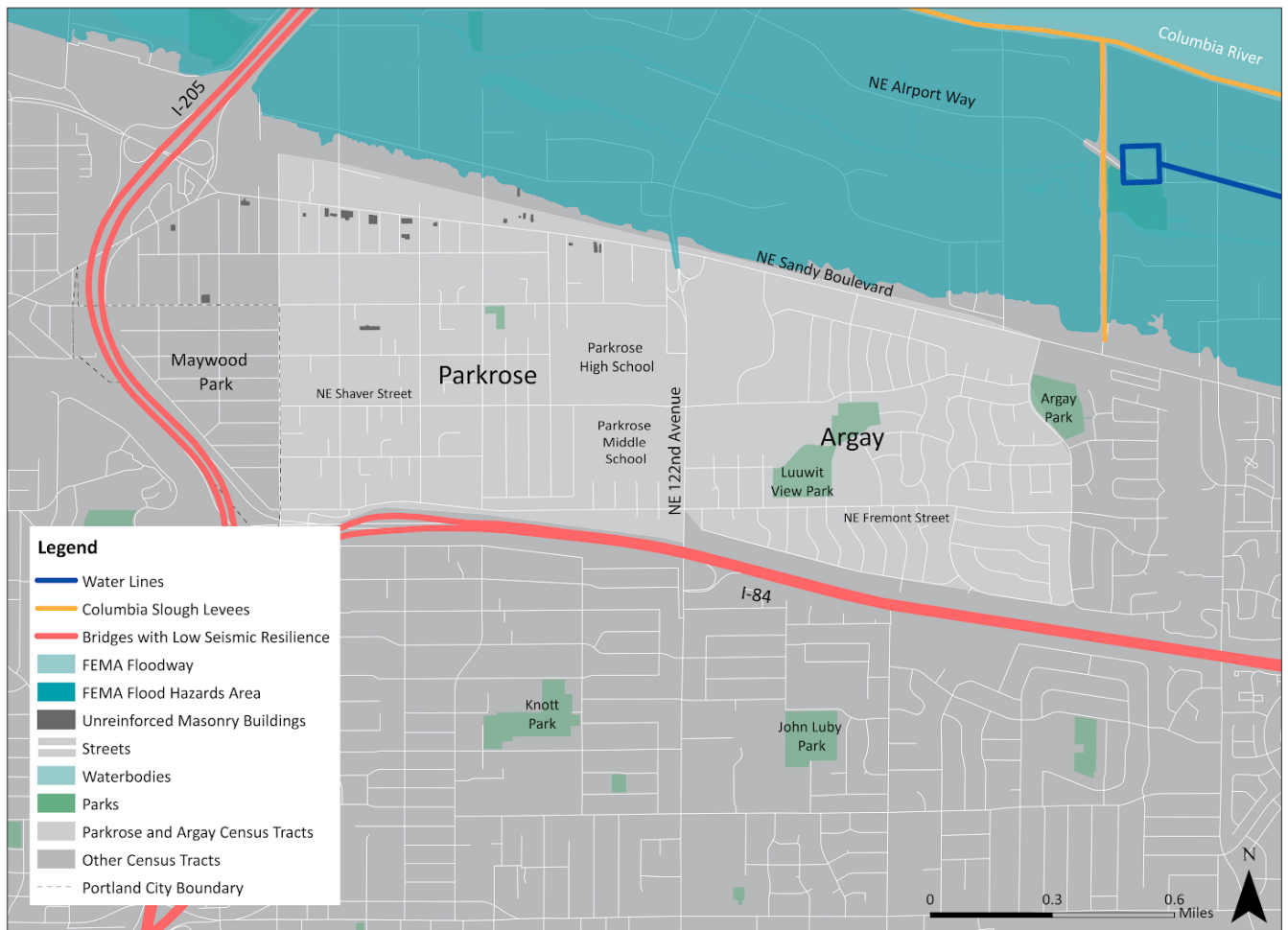
Appendix C: Surveys and Laotian Community
Conversation Questions

Appendix D: Survey Results

Appendix E: Related Public Policies

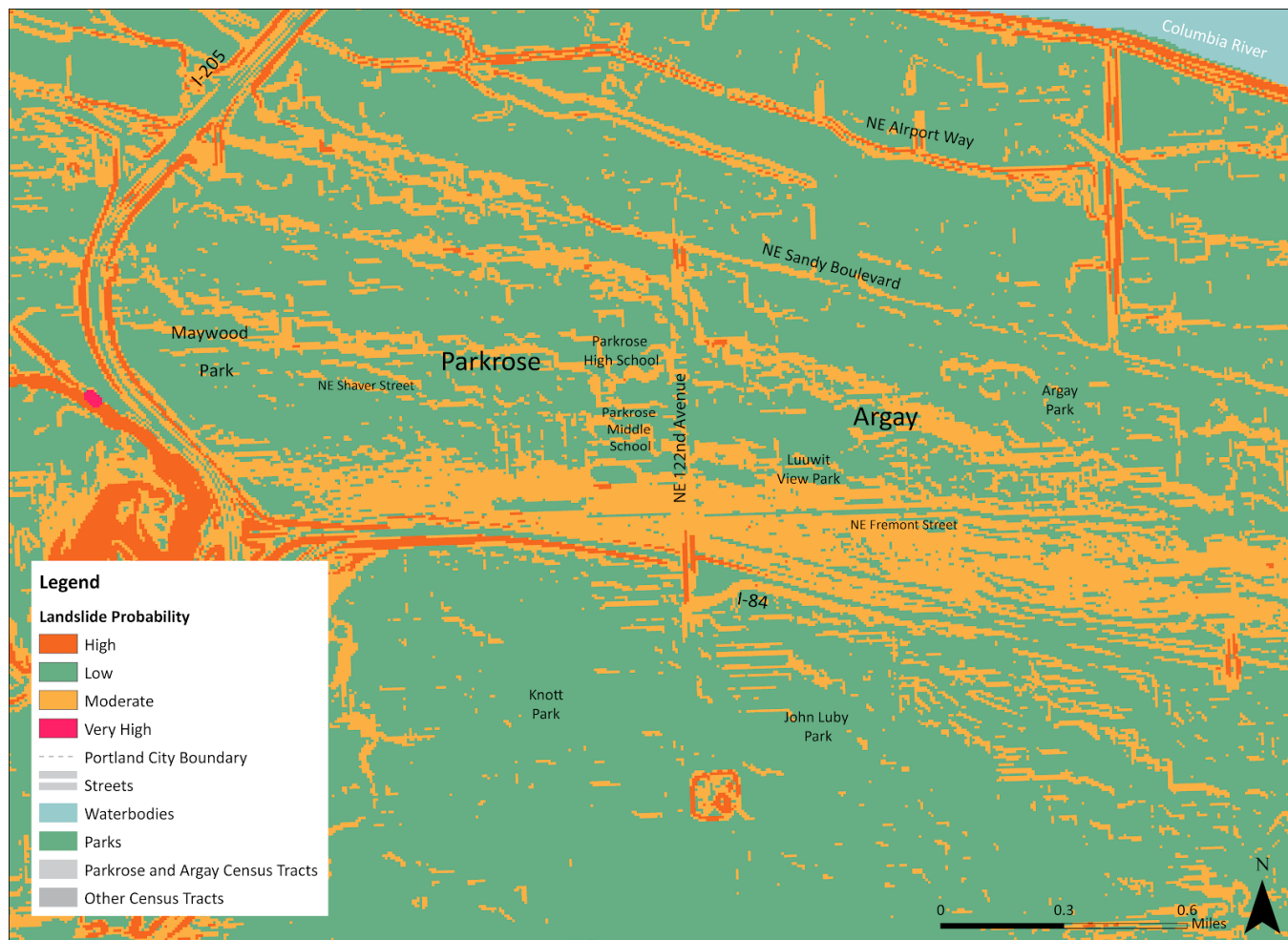
Appendix F: Glossary

Appendix A: Maps





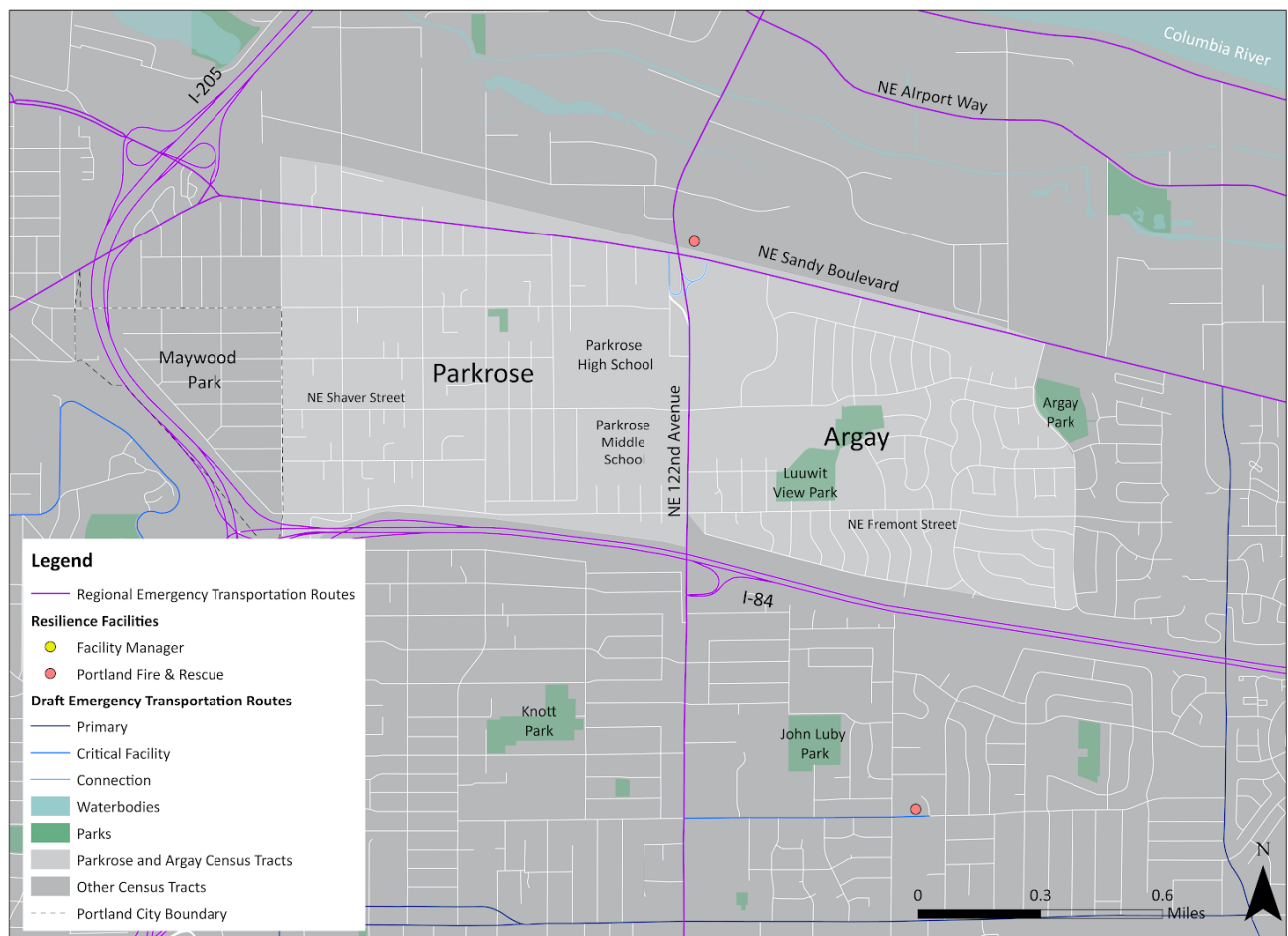
Map 2: Liquefaction Map
 Source: Federal Emergency Management Agency; City of Portland



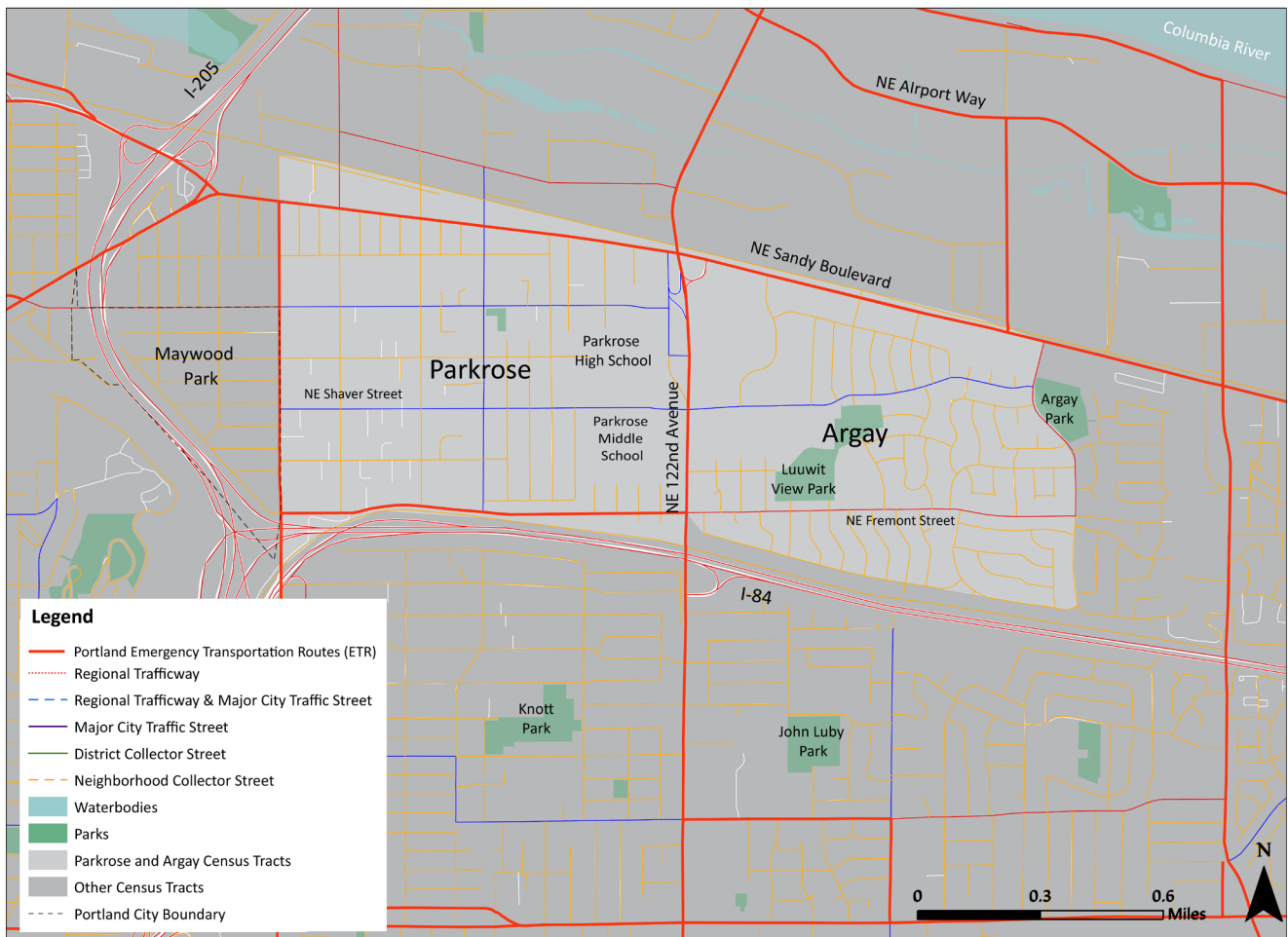
Map 3: Landslide Probability Map
Source: Oregon Department Of Geology And Mineral Industries



Map 4: Street Classifications Map
Source: PBOT



Map 5: Draft Emergency Transportation Routes
Source: PBOT



Map 6: PBOT/PFR Emergency Routes
Source: PBOT



Map 7: Street Surface
Source: PBOT



Appendix B: Demographics

Age

The age distribution in Parkrose and Argay does not differ significantly from that of Portland overall. The population in Argay is more slightly more heavily concentrated in the 45-64 years old age range as compared to the concentration in the 25-44 year old age range in Parkrose and Portland overall. Argay has a higher concentration of people living longer, past 85 years of age compared to Parkrose and the city of Portland. Block Group 3 also has a higher proportion of people 85 and older than Parkrose and the city of Portland.

	Parkrose	Argay	Argay Block Group 3	Portland, OR
< 5 years	252	250	138	35,240
% area population	6.30%	5.90%	6.90%	5.60%
5-14 years	417	336	227	62,925
% area population	10.00%	10.00%	10.00%	10.00%
15-24 years	531	521	361	69,804
% area population	13.00%	13.00%	13.00%	11.10%
25-44 years	1,635	930	608	230,659
% area population	35.20%	21.10%	30.60%	36.60%
45-64 years	1,069	1,224	468	156,101
% area population	25.00%	34.90%	23.50%	24.70%
65-84 years	494	442	141	65,513
% area population	9.00%	9.00%	9.00%	10.40%
85+ years	22	150	45	10089
% area population	0.40%	4.80%	2.30%	1.60%
Total Area Population	4,430	3,853	1,988	630,331

Table 6: Age Distribution in Parkrose, Argay, and Portland, OR
Source: American Community Survey, 2013-2017

Appendix C: Surveys and Laotian Community Conversation Questions

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Ready Streets Survey



Thank you for your interest in taking our short (less than 5 minutes) survey. Your responses and insights will help us create a better project. Each respondent will be entered to win one of two \$25 gift cards, just for filling out the survey!

We are Masters of Urban and Regional Planning Students at Portland State University doing a project in Northeast Portland with the Portland Bureau of Transportation (PBOT). The purpose of our project is to look at how to create strong and connected ways for people to move around their neighborhoods without cars after a disaster. The goal of this survey is to gather input from community members about how people get around their neighborhood. To learn more about Ready Streets, our workshop project, visit our website at www.readystreets.com.

This survey is available in a large format, printed paper format, and in multiple languages. To request a survey in a different format or language please email jposada@pdx.edu.

1. What neighborhood do you live in?

- ☐ Parkrose
- ☐ Parkrose Heights
- ☐ Argay
- ☐ Argay Terrace
- ☐ Wilkes
- ☐ Russell
- ☐ Hazelwood
- ☐ Other (please specify):
- ☐ Don't know

2. Which best describes the type of home you live in? Please mark all that apply.

- ☐ Apartment/Condominium/Duplex/Triplex/ Fourplex
- ☐ Detached, or single family house
- ☐ Mobile Home/RV
- ☐ Car or Truck
- ☐ Senior 55+ Community
- ☐ Tent or Street Living

<https://portlandstate.qualtrics.com/Q/EditSection/Blocks/Ajax/GetSurveyPrintPreview>

1/4

3. Which best describes your living situation?

- ☐ I rent my home
- ☐ I own my home
- ☐ I neither rent nor own a home

4. About how long does it take you to get from your home to the following destinations?

	5-10 minutes	10-20 minutes	20-30 minutes	more than 30 minutes
Your work/school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grocery store	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your children's school/daycare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doctor's office/medical care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pharmacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Church or religious service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community meeting (i.e. neighborhood association meeting or club meeting)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. How do you usually travel to the destinations listed below? Please mark all that apply.

	Car/truck/ motorcycle	Bicycle	Public transit (i.e. bus, MAX, dial-a- ride)	Scooter/ skateboard	Wheelchair/ personal mobility device	Walking
Your work/school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grocery store	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your children's school/daycare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doctor's office/medical care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Church or religious service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community meeting (i.e. neighborhood association meeting or club meeting)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. What is your race/ ethnicity? Please mark all that apply.

- ☐ Hispanic/Latino/a/x
- ☐ Black/African-American
- ☐ Asian
- ☐ Caucasian
- ☐ Pacific Islander
- ☐ Native American, Native Alaskan, or Native Hawaiian

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☐ Other/ prefer to self-describe:

☐ Prefer not to say

7. What is your gender?

- ☐ Male
- ☐ Female
- ☐ non-binary/third gender
- ☐ prefer to self identify
-
- ☐ Prefer not to say

8. What is your annual household income?

- ☐ I have no income
- ☐ less than \$20,000
- ☐ \$21,000-40,000
- ☐ \$41,000-\$60,000
- ☐ \$61,000-\$80,000
- ☐ \$81,000-\$100,000
- ☐ more than \$100,000
- ☐ Prefer not to say

9. How many people live in your household?

- ☐ Just me
- ☐ 2 people, including me
- ☐ 3 people, including me
- ☐ 4 people, including me
- ☐ 5 people, including me
- ☐ 6 people, including me
- ☐ 7 people, including me
- ☐ 8 people, including me
- ☐ More than 8 people, including me

10. What is your age?

- ☐ less than 18
- ☐ 18-25
- ☐ 26-35

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- ☒ 36-45
- ☐ 46-55
- ☐ 56-65
- ☐ 66-75
- ☐ 76-85
- ☐ More than 85

11. What is the nearest major street intersection to your house (i.e. 122nd and Sandy)?

Optional: Enter your name and either email address or phone number below to be entered to win one of two \$25 gift cards for taking our survey!

If you don't give us contact information, you will not be entered to win. Winner will be drawn randomly in mid-May 2019 and will be contacted directly by the project team.

Name

Contact Information (email or phone number)

Default Question Block

ຂໍຂອບໃຈທີ່ທ່ານສົນໃຈໃນການເຮັດແບບສຳຫຼວດສັນ ຂອງພວກເຮົາ (ໜ້ອຍກວ່າ 5 ນາທີ). ຄຳຕອບ ແລະ ຂໍ້ມູນ ຂອງທ່ານຈະຊ່ວຍພວກເຮົາ ສ້າງສັນໃໝ່ທີ່ດີໄດ້. ຜູ້ຕອບແຕ່ລະຄົນຈະຊັບວາງອັນໜຶ່ງໃນສອງບັດຂອງຂັ້ນ 25 ໂດລາ, ແບ່ງແຕ່ຕໍ່ແບບສຳຫຼວດນີ້!

ພວກເຮົາແມ່ນນັກສຶກສາປະລິນຍາໂທ ສາຂາການວາງຜັງເມືອງ ແລະ ເຂດພາກພື້ນ (Masters of Urban and Regional Planning) ຢູ່ທີ່ມະຫາ ວິທະຍາໄລ Portland State University ກຳລັງດຳເນີນໂຄງການຢູ່ Northeast Portland ຮ່ວມກັບ Portland Bureau of Transportation (PBOT). ຈຸດປະສົງ ຂອງໂຄງການຂອງພວກເຮົາແມ່ນເພື່ອ ສຶກສາເບິ່ງວິທີການສ້າງເສັ້ນທາງທີ່ແຂງແຮງ ແລະ ເຊື່ອມໂຍງກັນໃຫ້ແກ່ຜູ້ຄົນໄດ້ສັນຈອນໄປມາ ໃນບໍລິເວນບ້ານຂອງພວກເຮົາໂດຍທີ່ບໍ່ມີລົດຍົນ ຫຼັງຈາກໄພພິບັດ.

ເປົ້າໝາຍຂອງແບບສຳຫຼວດນີ້ແມ່ນເພື່ອຮວບຮວມຂໍ້ມູນຈາກສະມາຊິກໃນຊຸມຊົນກ່ຽວກັບວິທີທີ່ພວກເຮົາ ສັນຈອນໄປມາໃນເຂດບ້ານຂອງພວກ ເຮົາ. ເພື່ອຮຽນຮູ້ເພີ່ມຕື່ມກ່ຽວກັບ Ready Streets ເຊິ່ງແມ່ນໂຄງການຝຶກງານຂອງພວກເຮົາ, ໃຫ້ເຂົ້າໄປທີ່ເວັບໄຊຂອງພວກເຮົາໄດ້ທີ່ www.readystreets.com.

ແບບສຳຫຼວດນີ້ມີໃຫ້ເປັນຮູບແບບຂະໜາດໃຫຍ່, ແບບເຈ້ຍພິມ ແລະ ມີຫຼາຍພາສາ. ເພື່ອຮ້ອງຂໍແບບສຳຫຼວດໃນຮູບແບບອື່ນຫຼື ພາສາອື່ນ, ກະລຸນາສົ່ງອີເມວໄປທີ່ jposada@pdx.edu.

1. ທ່ານອາໄສຢູ່ເຂດໃດ?

- ☐ Parkrose
- ☐ Parkrose Heights
- ☐ Argay
- ☐ Argay Terrace
- ☐ Wilkes
- ☐ Russell
- ☐ Hazelwood
- ☐ ອື່ນໆ (ກະລຸນາບອກລະອຽດ)
- ☐ ບໍ່ຮູ້

2. ຂໍໃດທີ່ອະທິບາຍປະເພດເຮືອນທີ່ທ່ານອາໄສຢູ່ໄດ້ດີທີ່ສຸດ? ກະລຸນາໝາຍເອົາທຸກຂໍ້ທີ່ກ່ຽວຂ້ອງ.

- ☐ ອາພາດເມັນ/ຄອບໂດ/ອາຄານທີ່ພັກຮອງຊັ້ນ/ອາຄານທີ່ພັກສາມຊັ້ນ/ອາຄານທີ່ພັກສີ່ຊັ້ນ
- ☐ ເຮືອນຕົດກັນ ຫຼື ເຮືອນຄອບຄົວດ່ຽວ
- ☐ ເຮືອນເຄື່ອນທີ່/RV

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- ☐ ລົດຍົນ ຫຼື ລົດບັນທຸກ
- ☐ ລຸມລຸນອາດໃສ 55 ປີຂຶ້ນໄປ
- ☐ ອາໄສຢູ່ໃນເດີ້ນ ຫຼື ຕາມທ້ອງຖະໜົນ

3. ຂໍໃດທີ່ອະທິບາຍສະພາບການດຳລົງຊີວິດຂອງທ່ານໄດ້ດີທີ່ສຸດ?

- ☐ ຂ້າພະເຈົ້າເຊົາເຮືອນຢູ່
- ☐ ຂ້າພະເຈົ້າມີເຮືອນເປັນຂອງຕົນເອງ
- ☐ ຂ້າພະເຈົ້າບໍ່ໄດ້ເຊົາ ຫຼື ມີເຮືອນເປັນຂອງຕົນເອງ

4. ທ່ານໃຊ້ເວລາອອກຈາກບ້ານໄປຍັງຈຸດໝາຍປາຍທາງດັ່ງນີ້ຫຼາຍປານໃດ?

	5-10 ນາທີ	10-20 ນາທີ	20-30 ນາທີ	ຫຼາຍກວ່າ 30 ນາທີ
ບ່ອນເຮັດວຽກ/ໃຮງຮຽນຂອງທ່ານ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ຮ້ານຂາຍເຄື່ອງແຫ້ງ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ໃຮງຮຽນ/ສະຖານລ້ຽງເດັກ ຂອງລູກທ່ານ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ສຳນັກງານທ່ານໝໍ/ສະຖານທີ່ການແພດ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ຮ້ານຂາຍຢາ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ໃບດ ຫຼື ການບໍລິການທາງສາດສະໜາ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ຫໍປະຊຸມຂອງລຸມລຸນ (ເຊັ່ນ: ຫໍປະຊຸມສະມາຄົມບ້ານໃກ້ເຮືອນຄຽງ ຫຼື ສະໄມຊອນ)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. ປົກກະຕິທ່ານເດີນທາງໄປຈຸດໝາຍປາຍທາງທີ່ລະບຸໄວ້ດັ່ງນີ້ແນວໃດ? ກະລຸນາໝາຍເອົາທຸກຂໍ້ທີ່ກ່ຽວຂ້ອງ.

	ລົດຍົນ/ລົດບັນທຸກ/ລົດຈັກ	ລົດຖີບ	ຂົນສົ່ງສາທາລະນະ (ເຊັ່ນ: ລົດເມ, MAX, ບໍລິການໃຫຍ່ເອີ້ນລົດ)	ລົດຈັກໄຟຟ້າ / ສະເກັດບອດ	ລົດລໍ້ຍີ່/ ອຸປະກອນເຄື່ອນທີ່ສ່ວນບຸກຄົນ	ຢ່າງ
ບ່ອນເຮັດວຽກ/ໃຮງຮຽນຂອງທ່ານ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ຮ້ານຂາຍເຄື່ອງແຫ້ງ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ໃຮງຮຽນ/ສະຖານທີ່ລ້ຽງເດັກ ຂອງລູກທ່ານ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ສຳນັກງານທ່ານໝໍ/ສະຖານທີ່ການແພດ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ຮ້ານຂາຍຢາ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ໃບດ ຫຼື ການບໍລິການທາງສາດສະໜາ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	ວິດີໂນ/ວິດ ບັນທຸກ/ວິດຈັກ	ວິດຖັບ	ຂັ້ນສົ່ງ ສາທາລະນະ (ເຊັ່ນ: ວິດເມ, MAX, ບໍລິການ ໃຫ້ເຮືອນວິດ)	ວິດຈັກໄຟຟ້າ / ສະເກັດບອດ	ວິດວິຊາ/ ຈຸດປະກອບ ເຄື່ອນທີ່ສ່ວນ ບຸກຄົນ	ຢ່າງ
ຫ້າປະຊາກອນຂອງຊຸມຊົນ (ເຊັ່ນ: ຫ້າປະຊາກອນ ສະມາຄົມບ້ານໃກ້ເຮືອນຄຽງ ຫຼື ສະໄໝສອນ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. ເຊື້ອຊາດ/ຊົນເຜົ່າຂອງທ່ານແມ່ນຫຍັງ? ກະລຸນາໝາຍເອົາທຸກຂໍ້ທີ່ກ່ຽວຂ້ອງ.

- ☐ ລາຕິນ-ຮາເມລິກັນ/ລາຕິໂນ/a/x
- ☐ ຊາວຜິວດຳ/ຊາວອາຟຣິກັນ-ຮາເມລິກັນ
- ☐ ຊາວອາຊຽນ
- ☐ ຊາວຜິວຂາວ
- ☐ ຊາວເກາະປາຊີຟິກ
- ☐ ຊາວຮາເມລິກັນເພີ່ນເມືອງ, ຊາວອາຟຣິກັນເພີ່ນເມືອງ, ຫຼື ຊາວຮາວາຍເພີ່ນເມືອງ
- ☐ ອື່ນໆ/ ຕ້ອງການອະທິບາຍເອງ:
- ☐ ບໍ່ຂໍຕອບ

7. ເພດຂອງທ່ານແມ່ນຫຍັງ?

- ☐ ເພດຊາຍ
- ☐ ເພດຍິງ
- ☐ ບໍ່ແມ່ນຊາຍ ຫຼື ຍິງ/ເພດທີສາມ
- ☐ ບາດຖະໜາທີ່ຈະບໍ່ເບິ່ງ
- ☐ ບໍ່ຂໍຕອບ

8. ລາຍຮັບຄົດເຮືອນຈະມີ ຂອງຄອບຄົວຂອງທ່ານເທົ່າໃດ?

- ☐ ຂ້ອຍບໍ່ມີລາຍໄດ້
- ☐ ຫນ້ອຍກວ່າ 20,000 ໂດລາ
- ☐ 21,000-40,000 ໂດລາ
- ☐ 41,000-\$60,000 ໂດລາ
- ☐ 61,000-\$80,000 ໂດລາ
- ☐ 81,000-\$100,000 ໂດລາ
- ☐ ຫຼາຍກວ່າ 100,000 ໂດລາ
- ☐ ບໍ່ຂໍຕອບ

9. ມີຈັກຄົນອາໄສຢູ່ໃນຄົວເຮືອນຂອງທ່ານ?

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- ☐ ມີເຈດຕະນາ
- ☐ 2 ຄົນ ລວມທັງເຈດຕະນາ
- ☐ 3 ຄົນ ລວມທັງເຈດຕະນາ
- ☐ 4 ຄົນ ລວມທັງເຈດຕະນາ
- ☐ 5 ຄົນ ລວມທັງເຈດຕະນາ
- ☐ 6 ຄົນ ລວມທັງເຈດຕະນາ
- ☐ 7 ຄົນ ລວມທັງເຈດຕະນາ
- ☐ 8 ຄົນ ລວມທັງເຈດຕະນາ
- ☐ ຫຼາຍກວ່າ 8 ຄົນ ລວມທັງເຈດຕະນາ

10. ອາຍຸຂອງທ່ານເທົ່າໃດ?

- ☐ ຕ່ຳກວ່າ 18
- ☐ 18-25
- ☐ 26-35
- ☐ 36-45
- ☐ 46-55
- ☐ 56-65
- ☐ 66-75
- ☐ 76-85
- ☐ ຫຼາຍກວ່າ 85

11. ທາງເລືອກໃຫຍ່ໃດທີ່ໄດ້ໃກ້ກັບບ້ານຂອງທ່ານທີ່ສຸດ (ຕົວຢ່າງ: 122nd ແລະ Sandy)?

ທາງເລືອກແຕ່ບໍ່ຈຳເປັນ: ປ້ອນຊື່ຂອງທ່ານ ແລະ ທັງທີ່ຢູ່ອີເມວ ຫຼື ເບີໂທລະສັບລົງທາງດ້ານນີ້ ເພື່ອເຂົ້າຮ່ວມຊັ້ນຮັບລາງວັນ ຫຼັງໃນສອງປັດຂອງ
ຂ້ອນ 25 ໂດລາ ສຳລັບການຮ່ວມເຮັດແບບສອບຖາມຂອງພວກເຮົາ!

ຖ້າຫາກວ່າທ່ານບໍ່ໃຫ້ຂໍ້ມູນຕິດຕໍ່ແກ່ພວກເຮົາ, ທ່ານຈະບໍ່ໄດ້ຊົດເຂົ້າຮ່ວມຊັ້ນຮັບລາງວັນ. ຜູ້ໄດ້ຮັບລາງວັນຈະຖືກເລືອກໃນກາງເດືອນ ພຶດສະພາ
2019 ແລະ ທີມງານຂອງໂຄງການຈະຕິດຕໍ່ຫາທ່ານໂດຍກົງ.

ຊື່

ຂໍ້ມູນຕິດຕໍ່ (ອີເມວ ຫຼື ເບີໂທລະສັບ)

Encuesta de ReadyStreets

Gracias por su interés en contestar nuestra breve encuesta (menos de 5 minutos). Sus respuestas e ideas nos ayudarán a crear un mejor proyecto. Cada encuestado participará para ganar una tarjeta de regalo de \$25.00 dólares, solo para agradecerle por su interés en contestar nuestra breve encuesta (menos de 5 minutos). Sus respuestas e ideas nos ayudarán a crear un mejor proyecto. Cada encuestado participará para ganar una tarjeta de regalo de \$25.00 dólares, ¡solo por completar la encuesta!

Somos maestros de los estudiantes de planificación urbana y regional en la Universidad Estatal de Portland y estamos realizando un proyecto en el noreste de Portland con la Oficina del Transporte de Portland (PBOT, por sus siglas en inglés). El propósito de nuestro proyecto es encontrar cómo crear formas conectadas y sólidas para que las personas se trasladen sin usar automóviles en sus vecindarios después de un desastre. El objetivo de esta encuesta es reunir las opiniones de los miembros de la comunidad sobre la manera en que las personas se trasladan en su vecindario. Para obtener más información sobre las calles Ready Street, nuestro proyecto de taller, visite nuestro sitio web www.readystreets.com.

Esta encuesta está disponible en formato grande, impresa en papel y en varios idiomas. Para solicitar una encuesta en un formato o idioma diferente, envíe un mensaje de correo electrónico a jposada@pdx.edu.

1. ¿En qué vecindario vive usted?

- ☐ Parkrose
- ☐ Parkrose Heights
- ☐ Argay
- ☐ Argay Terrace
- ☐ Wilkes
- ☐ Russell
- ☐ Hazelwood
- ☐ Other (please specify):
- ☐ Don't know

2. ¿Cómo describiría mejor el tipo de vivienda en que vive? Por favor marque todas las opciones que correspondan.

- ☐ Departamento/Condominio/Dúplex/Triplex/ Fourplex
- ☐ Unipersonal o unifamiliar
- ☐ Casa móvil/Casa rodante

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- ☐ Automóvil o camión
- ☐ Comunidad para personas mayores de 55 años
- ☐ Tienda o en la calle

3. ¿Cómo describe mejor su situación de vivienda?

- ☐ En alquiler
- ☐ Soy dueño de casa
- ☐ No vivo en alquiler ni soy dueño de casa

4. ¿Cuánto tiempo le toma ir de su casa a los siguientes destinos?

	De 5 a 10 minutos	De 10 a 20 minutos	De 20 a 30 minutos	Mas de 30 minutos
Su trabajo/escuela	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
El supermercado	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La escuela o guardería de sus hijos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
El consultorio de su médico/cuidado médico	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Farmacia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Iglesia o servicio religioso	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Junta comunitaria (por ejemplo, asociación de vecinos o junta del club)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. ¿Cómo se transporta usualmente a los siguientes destinos? Por favor marque todas las opciones que correspondan.

	Automóvil/ Camión/ Motocicleta	Bicicleta	Transporte público (autobús, MAX, otro)	Patineta	Silla de ruedas/Aparato de movilidad personal	Caminar
Su trabajo/escuela	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
El supermercado	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
La escuela o guardería de sus hijos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
El consultorio de su médico/cuidado médico	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farmacia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Iglesia o servicio religioso	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Junta comunitaria (por ejemplo, asociación de vecinos o junta del club)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. ¿Cuál es su raza o etnicidad? Por favor marque todas las opciones que correspondan.

☐

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Hispano/Latino/a/x

- ☐ Negro/Afroamericano
- ☐ Asiático
- ☐ Caucásico
- ☐ Nativo de la Polinesia
- ☐ Nativo Americano, nativo de Alaska o nativo de Hawaii
- ☐ Otro / prefiere describirse a si mismo:
- ☐ Prefiere no contestar

7. ¿Cuál es su género?

- ☐ Hombre
- ☐ Mujer
- ☐ Heterosexual / tercer género
- ☐ Prefiere describirse a si mismo:
- ☐ Prefiere no contestar

8. ¿Cuál es el ingreso anual de su hogar?

- ☐ No tengo ingresos
- ☐ Menos de \$20,000 dólares
- ☐ Entre \$21,000 y \$40,000 dólares
- ☐ Entre \$41,000 y \$60,000 dólares
- ☐ Entre \$61,000 y \$80,000 dólares
- ☐ Entre \$81,000 y \$100,000 dólares
- ☐ Mas de \$100,000 dólares
- ☐ Prefiere no contestar

¿Cuántas personas viven en su casa?

- ☐ solo yo
- ☐ 2 personas, incluyéndome a mí
- ☐ 3 personas, incluyéndome a mí
- ☐ 4 personas, incluyéndome a mí
- ☐ 5 personas, incluyéndome a mí
- ☐ 6 personas, incluyéndome a mí
- ☐ 7 personas, incluyéndome a mí
- ☐ 28 personas, incluyéndome a mí

<https://portlandstate.qualtrics.com/Q/EditSection/Blocks/Ajax/GetSurveyPrintPreview>

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☐ Más de 8 personas, incluyéndome a mí

10. ¿Cuál es su edad?

- ☐ menos de 18 años
- ☐ de 18 a 25 años
- ☐ de 26 a 35 años
- ☐ de 36 a 45 años
- ☐ de 46 a 55 años
- ☐ de 56 a 65 años
- ☐ de 66 a 75 años
- ☐ de 76 a 85 años
- ☐ mas de 85 años

11. ¿Cuál es la intersección de calles más cercana a su casa (por ejemplo: 122nd y Sandy)?

Opcional: Escriba su nombre o su dirección de correo electrónico o número de teléfono para participar y ganar una de las dos tarjetas de regalo de \$25.00 dólares ¡por contestar a esta encuesta!

Si no nos proporciona su información de contacto, no podrá participar para ganar. Los ganadores serán seleccionados al azar a mediados de mayo de 2019 y serán contactados directamente por el grupo del proyecto.

Nombre

Información de contacto (correo electrónico / número de teléfono)

Laotian Community Conversation Questions

Question 1: Think of the resources your family needs... doctors, groceries, etc. How many of you live in Parkrose/Argay and feel like your daily needs are met within your neighborhood? What do you go outside of the neighborhood for?

Question 2: What kinds of resources and/or programs would you like to have to be better prepared for after an earthquake?

Question 3: How would you prefer to have access to supplies in the event of a natural disaster? Would you like to have your own preparedness kit or have a community-kept cache of supplies at a central location, like the temple? Or both?

Question 4: How would you like your community to be further involved?

Appendix D: Survey Results

1: What neighborhood do you live in?

Neighborhood	Spanish	Lao	English	All Languages
Parkrose	10	3	8	21
Parkrose Heights	0	0	2	2
Argay	1	0	1	2
Argay Terrace	0	0	2	2
Wilkes	0	0	0	0
Russell	3	0	1	4
Hazelwood	2	0	0	2
Other (please specify)	3	11	21	35
Don't know	0	2	0	2
Total Responses	19	16	36	71

2. Which best describes the type of home you live in? Please mark all that apply.

Home Type	Spanish	Lao	English	All Languages
Apartment/Condominium/ Duplex/Triplex/ Fourplex	11	5	7	23
Detached, or single family house	7	11	28	46
Mobile Home/RV	3	0	0	3
Car or Truck	1	0	1	2
Senior 55+ Community	1	1	0	2
Tent or Street Living	1	0	0	1
Total Responses	24	17	36	77

3. Which best describes your living situation?

Living Situation	Spanish	Lao	English	All Languages
I rent my home	11	6	7	24
I own my home	8	9	26	43
I neither rent nor own a home	0	1	2	3
Total Responses	19	16	32	67

4. About how long does it take you to get from your home to the following destinations?

Your work/school	Spanish	Lao	English	All Languages
5-10 minutes	7	3	14	24
10-20 minutes	7	1	7	15
20-30 minutes	4	5	8	17
>30 minutes	1	2	2	5

Grocery store	Spanish	Lao	English	All Languages
5-10 minutes	16	10	27	53
10-20 minutes	3	3	6	12
20-30 minutes	1	1	1	3
>30 minutes	0	0	1	1

Your children's school/ daycare	Spanish	Lao	English	All Languages
5-10 minutes	12	5	11	28
10-20 minutes	4	4	5	13
20-30 minutes	1	1	1	3
>30 minutes	2	1	2	5

Doctor's office/ medical care	Spanish	Lao	English	All Languages
5-10 minutes	3	0	11	14
10-20 minutes	10	6	13	29
20-30 minutes	3	3	7	13
>30 minutes	4	2	1	7

Pharmacy	Spanish	Lao	English	All Languages
5-10 minutes	8	7	20	35
10-20 minutes	8	3	9	20
20-30 minutes	0	1	2	3
>30 minutes	3	0	1	4

Church or religious service	Spanish	Lao	English	All Languages
5-10 minutes	4	4	13	21
10-20 minutes	8	4	10	22
20-30 minutes	4	2	3	9
>30 minutes	3	1	3	7

Community meeting (neighborhood association or club meeting)	Spanish	Lao	English	All Languages
5-10 minutes	11	3	20	34
10-20 minutes	22	3	5	30
20-30 minutes	1	2	3	6
> 30 minutes	2	1	0	3

5. How do you usually travel to the destinations listed below? Please mark all that apply.

Your work/school	Spanish	Lao	English	All Languages
Car/truck/ motorcycle	12	11	26	49
Bicycle	2	2	2	6
Public transit (i.e. bus, MAX, dial-a-ride)	4	0	4	8
Scooter/ skateboard	0	0	0	0
Wheelchair/personal mobility device	0	0	0	0
Walking	5	0	4	9

Grocery store	Spanish	Lao	English	All Languages
Car/truck/ motorcycle	14	9	34	57
Bicycle	1	2	2	5
Public transit (i.e. bus, MAX, dial-a-ride)	5	0	3	8
Scooter/ skateboard	0	0	0	0
Wheelchair/ personal mobility device	1	0	0	1
Walking	5	1	3	9

Your children's school /daycare	Spanish	Lao	English	All Languages
Car/truck/ motorcycle	12	9	13	34
Bicycle	1	2	0	3
Public transit (i.e. bus, MAX, dial-a-ride)	2	0	2	4
Scooter/ skateboard	0	0	0	0
Wheelchair/ personal mobility device	0	0	0	0
Walking	6	1	3	10

Doctor's office/ medical care	Spanish	Lao	English	All Languages
Car/truck/ motorcycle	15	10	31	56
Bicycle	1	2	1	4
Public transit (i.e. bus, MAX, dial-a-ride)	5	0	3	8
Scooter/skateboard	0	0	0	0
Wheelchair/ personal mobility device	0	0	0	0
Walking	2	0	2	4

Pharmacy	Spanish	Lao	English	All Languages
Car/truck/ motorcycle	14	11	28	53
Bicycle	1	2	1	4
Public transit (i.e. bus, MAX, dial-a-ride)	3	0	3	6
Scooter/ skateboard	0	0	0	0
Wheelchair/ personal mobility device	0	0	0	0
Walking	3	0	3	6

Church or religious service	Spanish	Lao	English	All Languages
Car/truck/ motorcycle	18	11	26	55
Bicycle	0	2	1	3
Public transit (i.e. bus, MAX, dial-a-ride)	2	0	2	4
Scooter/ skateboard	0	0	0	0
Wheelchair/ personal mobility device	0	0	0	0
Walking	1	0	1	2

Community meeting (neighborhood association or club meeting)	Spanish	Lao	English	All Languages
Car/truck/ motorcycle	11	11	22	44
Bicycle	1	1	1	3
Public transit (i.e. bus, MAX, dial-a-ride)	0	0	2	2
Scooter/skateboard	0	0	0	0
Wheelchair/ personal mobility device	0	0	0	0
Walking	5	1	5	11

6. What is your race/ ethnicity? Please mark all that apply.

Race/Ethnicity	Spanish	Lao	English	All Languages
Hispanic/Latino/a/x	19	0	2	21
Black/African American	0	0	2	2
Asian	0	14	3	17
Caucasian	0	0	28	28
Pacific Islander	1	0	0	1
Native American, Native Alaskan, or Native Hawaiian	0	1	1	2
Other/ prefer to self-describe:	0	0	1	1
Prefer not to say	0	0	0	0
Total Responses	20	15	37	72

7. What is your gender?

Gender	Spanish	Lao	English	All Languages
Male	7	2	19	28
Female	13	13	17	43
Non-binary/third gender	0	0	0	0
Prefer to self identify	0	0	0	0
Prefer not to say	0	0	0	0
Total Responses	20	15	36	71

8. What is your annual household income?

Income	Spanish	Lao	English	All Languages
I have no income	3	0	0	3
less than \$20,000	3	4	3	10
\$21,000-40,000	5	5	4	14
\$41,000-\$60,000	2	3	7	12
\$61,000-\$80,000	0	0	4	4
\$81,000-\$100,000	3	0	5	8
more than \$100,000	1	0	11	12
Prefer not to say	3	2	2	7
Total Responses	20	14	36	70

9. How many people live in your household?

People	Spanish	Lao	English	All Languages
Just me	0	0	8	8
2 people, including me	1	3	13	17
3 people, including me	1	3	6	10
4 people, including me	4	6	5	15
5 people, including me	7	1	2	10
6 people, including me	3	1	2	6
7 people, including me	4	0	0	4
8 people, including me	0	0	0	0
More than 8 people, including me	0	1	0	1
Total Responses	20	15	36	71

10. What is your age?

Age	Spanish	Lao	English	Count
Less than 18	2	0	1	3
18-25	1	0	0	1
26-35	4	1	5	10
36-45	10	2	36	48
46-55	2	1	11	14
56-65	1	7	8	16
66-75	0	4	4	8
76-85	0	0	1	1
More than 85	0	0	2	2
Total Responses	20	15	36	71

Appendix E: Related Public Policies

Chapter 2: Community involvement

Goals

Goal 2.A: Community involvement as a partnership - The City of Portland works together as a genuine partner with all Portland communities and interests. The City promotes, builds, and maintains relationships, and communicates with individuals, communities, neighborhoods, businesses, organizations, Neighborhood Associations, Business Associations, institutions, and other governments to ensure meaningful community involvement in planning and investment decisions. Partnerships with historically under-served and under-represented communities must be paired with the City's neighborhood organizations to create a robust and inclusive community involvement system.

Goal 2.B: Social justice and equity - The City of Portland seeks social justice by expanding choice and opportunity for all community members, recognizing a special responsibility to identify and engage, as genuine partners, under-served and under-represented communities in planning, investment, implementation, and enforcement processes, particularly those with potential to be adversely affected by the results of decisions. The City actively works to improve its planning and investment-related decisions to achieve equitable distribution of burdens and benefits and address past injustices.

Goal 2.C: Value community wisdom and participation - Portland values and encourages community and civic participation. The City seeks and considers community wisdom and diverse cultural perspectives, and integrates them with technical analysis, to strengthen land use decisions.

Goal 2.E: Meaningful participation - Community members have meaningful opportunities to participate in and influence all stages of planning and decision making. Public processes engage the full diversity of affected community members, including under-served and under-represented individuals and communities. The City will seek and facilitate the involvement of those potentially affected by planning and decision making.

Goal 2.F: Accessible and effective participation - City planning and investment decision-making processes are designed to be accessible and effective, and responsive to the needs of all communities and cultures. The City draws from acknowledged best practices and uses a wide variety of tools, including those developed and recommended by under-served and under-represented communities, to promote inclusive, collaborative, culturally-responsive, and robust community involvement.

Goal 2.G: Strong civic infrastructure - Civic institutions, organizations, and processes encourage active and meaningful community involvement and strengthen the capacity of individuals and communities to participate in planning processes and civic life

Policies

Policy 2.3 Extend benefits: Ensure plans and investments promote environmental justice by

extending the community benefits associated with environmental assets, land use, and public investments to communities of color, low-income populations, and other under-served or under-represented groups impacted by the decision. Maximize economic, cultural, political, and environmental benefits through ongoing partnerships.

Policy 2.4 Eliminate burdens: Eliminate burdens. Ensure plans and investments eliminate associated disproportionate burdens (e.g. adverse environmental, economic, or community impacts) for communities of color, low-income populations, and other under-served or under-represented groups impacted by the decision.

2.4.a. Minimize or mitigate disproportionate burdens in cases where they cannot be eliminated.

2.4.b. Use plans and investments to address disproportionate burdens of previous decisions.

Policy 2.5 Community capacity building: Enhance the ability of community members, particularly those in under-served and/or under-represented groups, to develop the relationships, knowledge, and skills to effectively participate in plan and investment processes.

Policy 2.8 Channels of communication: Maintain two-way channels of communication among City Council, the Planning and Sustainability Commission (PSC), project advisory committees, City staff, and community members.

Policy 2.24 Representation: Facilitate participation of a cross-section of the full diversity of affected Portlanders during planning and investment processes. This diversity includes individuals, stakeholders, and communities represented by race, color, national origin, English proficiency, gender, age, disability, religion, sexual orientation, gender identity, and source of income.

Policy 2.28 Historical understanding: To better understand concerns and conditions when initiating a project, research the history, culture, past plans, and other needs of the affected community, particularly under-represented and underserved groups, and persons with limited English proficiency (LEP). Review preliminary findings with members of the community who have institutional and historical knowledge.

Policy 2.30 Culturally-appropriate processes: Consult with communities to design culturally-appropriate processes to meet the needs of those affected by a planning or investment project. Evaluate, use, and document creative and culturally-appropriate methods, tools, technologies, and spaces to inform and engage people from under-served and under-represented groups about planning or investment projects.

Policy 2.40 Tools for effective participation: Provide clear and easy access to information about administrative, quasi-judicial, and legislative land use decisions in multiple formats and through technological advancements and other ways.

Policy 2.41 Limited English proficiency (LEP): Ensure that limited English proficient (LEP) individuals are provided meaningful access to information about administrative, quasi-judicial, and legislative land use decisions, consistent with federal regulations.

Chapter 4: Design and Development

Goals

Goal 4D: Urban resilience - Buildings, streets, and open spaces are designed to ensure long-term resilience and to adjust to changing demographics, climate, and economy, and withstand and recover from natural disasters.

Chapter 6: Economic Development

Policies

Policy 6.5: economic resilience: Improve Portland's economic resilience to impacts from climate change and natural disasters through a strong local economy and equitable opportunities for prosperity.

Chapter 8: Public Facilities and Services

Goals

Goal 8.B: Multiple benefits - Public facility and service investments improve equitable service provision, support economic prosperity, and enhance human and environmental health.

Goal 8.C: Reliability and resiliency - Public facilities and services are reliable, able to withstand or recover from catastrophic natural and manmade events, and are adaptable and resilient in the face of long-term changes in the climate, economy, and technology.

Goal 8.D: Public rights-of-way - Public rights-of-way enhance the public realm and provide a multi-purpose, connected, safe, and healthy physical space for movement and travel, public and private utilities, and other appropriate public functions and uses.

Goal 8.I: Public safety and emergency response - Portland is a safe, resilient, and peaceful community where public safety, emergency response, and emergency management facilities and services are coordinated and able to effectively and efficiently meet community needs.

Policies

Policy 8.6 Interagency coordination: Maintain interagency coordination agreements with neighboring jurisdictions and partner agencies that provide urban public facilities and services within the City of Portland's Urban Services Boundary to ensure effective and efficient service delivery

Policy 8.8 Public service coordination: Coordinate with the planning efforts of agencies providing public education, public health services, community centers, urban forest management, library services, justice services, energy, and technology and communications services.

Policy 8.9 Internal coordination: Coordinate planning and provision of public facilities and services, including land acquisition, among City agencies, including internal service bureaus.

Policy 8.23 Asset management: Improve and maintain public facility systems using asset management principles to optimize preventative maintenance, reduce unplanned reactive maintenance, achieve scheduled service delivery, and protect the quality, reliability, and adequacy of City services.

Policy 8.24: Risk management: Maintain and improve Portland's public facilities to minimize or eliminate economic, social, public health and safety, and environmental risks.

Policy 8.27 Cost-effectiveness: Establish, improve, and maintain the public facilities necessary to serve designated land uses in ways that cost-effectively provide desired levels of service, consider facilities' lifecycle costs, and maintain the City's long-term financial sustainability.

Policy 8.32 Community benefits: Encourage providing additional community benefits with large public facility projects as appropriate to address environmental justice policies in Chapter 2: Community Involvement.

Policy 8.33: Community knowledge and experience: Encourage public engagement processes and strategies for large public facility projects to include community members in identifying potential impacts, mitigation measures, and community benefits.

Policy 8.34: Resource efficiency: Reduce the energy and resource use, waste, and carbon emissions from facilities necessary to serve designated land uses to meet adopted City goals and targets.

Policy 8.38: Age-friendly public facilities: Promote public facility designs that make Portland more age-friendly.

Policy 8.39 Interconnected network: Establish a safe and connected rights-of-way system that equitably provides infrastructure services throughout the city.

Policy 8.44 Community uses: Allow community use of rights-of-way for purposes such as public gathering space, events, food production, or temporary festivals, as long as the community uses are integrated in ways that balance and minimize conflict with the designated through movement and access roles of rights-of-ways.

Policy 8.104 Emergency preparedness, response, and recovery coordination: Coordinate land use plans and public facility investments between City bureaus, other public and jurisdictional agencies, businesses, community partners, and other emergency response providers, to ensure coordinated and comprehensive emergency and disaster risk reduction, preparedness, response, and recovery.

Policy 8.107 Community safety centers: Establish, coordinate, and co-locate public safety and other community services in centers.

Policy 8.110 Community preparedness: Enhance community preparedness and capacity to prevent, withstand, and recover from emergencies and natural disasters through land use decisions and public facility investments.

Policy 8.124 Equity, capacity, and reliability: Equity, capacity, and reliability. Encourage plans and investments in technology and communication infrastructure to ensure access in all areas of the city, reduce disparities in capacity, and affordability, and to provide innovative high-performance, reliable service for Portland's residents and businesses.

Chapter 9: Transportation

Goals

Goal 9.A Safety - The City achieves the standard of zero traffic-related fatalities and serious injuries. Transportation safety impacts the livability of a city and the comfort and security of those using City streets. Comprehensive efforts to improve transportation safety through equity, engineering, education, enforcement and evaluation will be used to eliminate traffic-related fatalities and serious injuries from Portland's transportation system.

Goal 9.E Equitable transportation - The transportation system provides all Portlanders options to move about the city and meet their daily needs by using a variety of safe, efficient, convenient, and affordable modes of transportation. Transportation investments are responsive to the distinct needs of each community.

Goal 9.G Opportunities for prosperity - The transportation system supports a strong and diverse economy, enhances the competitiveness of the city and region, and maintains Portland's role as a West Coast trade gateway and freight hub by providing efficient and reliable goods movement, multimodal access to employment areas and educational institutions, as well as enhanced freight access to industrial areas and intermodal freight facilities. The transportation system helps people and businesses reduce spending and keep money in the local economy by providing affordable alternatives to driving.

Goal 9.H Cost effectiveness - The City analyzes and prioritizes capital and operating investments to cost effectively achieve the above goals while responsibly managing and protecting our past investments in existing assets.

Policies

Policy 9.6 Transportation strategy for people movement: Implement a prioritization of modes for people movement by making transportation system decisions according to the following ordered list:

1. Walking
2. Bicycling
3. Transit
4. Fleets of electric, fully automated, multiple passenger vehicles
5. Other shared vehicles
6. Low or no occupancy vehicles, fossil-fueled non-transit vehicles

When implementing this prioritization, ensure that:

- The needs and safety of each group of users are considered, and changes do not make existing conditions worse for the most vulnerable users higher on the ordered list.
- All users' needs are balanced with the intent of optimizing the right of way for multiple modes on the same street.
- When necessary to ensure safety, accommodate some users on parallel streets as part of a multi-street corridor.
- Land use and system plans, network functionality for all modes, other street functions, and complete street policies, are maintained.
- Policy-based rationale is provided if modes lower in the ordered list are prioritized.
- Specific modal policies are found below in policies 9.17 to 9.40.

Policy 9.14 Streets for transportation and public spaces: Integrate both placemaking and transportation functions when designing and managing streets by encouraging design, development, and operation of streets to enhance opportunities for them to serve as places for community interaction, environmental function, open space, tree canopy, recreation, and other community purposes.

Policy 9.15 Repurposing street space: Encourage repurposing street segments that are not critical for transportation connectivity to other community purposes.

Policy 9.17 Pedestrian transportation: Encourage walking as the most attractive mode of transportation for most short trips, within neighborhoods and to centers, corridors, and major destinations, and as a means for accessing transit.

Policy 9.18 Pedestrian networks: Create more complete networks of pedestrian facilities, and improve the quality of the pedestrian environment.

Policy 9.19 Pedestrian safety and accessibility: Improve pedestrian safety, accessibility, and convenience for people of all ages and abilities.

Policy 9.20 Bicycle transportation: Create conditions that make bicycling more attractive than driving for most trips of approximately three miles or less.

Policy 9.21 Accessible bicycle system: Create a bicycle transportation system that is safe, comfortable, and accessible to people of all ages and abilities.

Policy 9.40 Emergency response: Maintain a network of accessible emergency response streets to facilitate safe and expedient emergency response and evacuation. Ensure that police, fire,

ambulance, and other emergency providers can reach their destinations in a timely fashion, without negatively impacting traffic calming and other measures intended to reduce crashes and improve safety.

Policy 9.62 Coordination: Coordinate with state and federal agencies, local and regional governments, special districts, other City bureaus, and providers of transportation services when planning for, developing, and funding transportation facilities and services.

Appendix F: Glossary

BEECN - Basic Earthquake Emergency Communication Node. A BEECN will be activated by the Portland Bureau of Emergency Management and will be seen as a pop-up tent with a cache of supplies. A BEECN serves the purpose of not only providing basic supplies but also a communication hub

Business-as-usual - the status quo; the “normal”

Cargo bike - a bike that has increased carrying capacity built on it

Cascadia Subduction Zone (CSZ): a 700-mile-long subduction zone that’s just off the coast of California, Oregon and Washington that will eventually produce a mammoth earthquake, scientists say

Community - a group of people living in the same place or having a particular characteristic in common

Emergency Response Classes - specified routes in the City of Portland that prioritize emergency travel. The City of Portland has three tiers of emergency travel: Major Emergency Response, Secondary Emergency Response, and Minor Emergency Response. These routes do not directly overlap with Metro’s Emergency Transportation Routes

Emergency Transportation Routes (ETR) - specified routes within the Metro area that prioritize emergency vehicles. These routes do not directly overlap with the City of Portland’s Emergency Response Classes

Epicenter - the point on the earth’s surface vertically above the focus of an earthquake

Human-powered mobility: The transport of a person using human muscle power. Some examples include walking, running, cycling and rolling

Island effect - the situation in which a geographic area is isolated based on external factors

Limited English Proficiency (LEP) - a term used in the United States that refers to a person who is not fluent in the English language, often because it is not their native language. Both LEP and English-language learner are terms used by the Office for Civil Rights, a sub-agency of the U.S. Department of Education

Liquefaction - the occurrence of saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress such as shaking during an earthquake or other sudden change in stress condition, in which material that is ordinarily a solid behaves like a liquid

Mitigation phase - the phase of emergency management that works to minimize damages before the next emergency

Neighborhood Emergency Teams (NET) - a locally-based volunteer group that is trained to respond to emergencies

Non-motorized - without a motor, whether that be a gas-powered or electric motor
Pedestrian - This mobility category includes anyone traveling by foot or with the assistance of a mobility device of any sort, such as a wheelchair

Placemaking - emphasizing or accenting a place through physical changes (such as an intersection painting) and social participation in the act

Preparedness phase - the phase of emergency management that works to prepare individuals, groups, and agencies before the next emergency

PREPHub - a new kind of infrastructure designed to increase disaster resilience. Composed of flexible kit of parts, each component serves the community in both everyday and emergency scenarios

Recovery period: 2 to 30 days after a disaster. Survivors begin to return to daily activities.

Resiliency - the capacity to recover quickly from difficulties, especially to natural disasters such as earthquakes

Response period: 0 to 48 hours after a disaster; during this time period, efforts are focused on life safety

Retrofitting - changing the structure of a building, road, bridge, etc. after it is built. With earthquakes, many buildings are “seismically retrofitted”, which means that the structure that is retrofitted could, in theory, withstand a seismic event

Richter magnitude scale: Earthquakes are classified by magnitude scale, ranging from 1.0 to 9 or above. A 9.0 magnitude earthquake is considered catastrophic and it has the potential to destroy communities near the epicenter

Social capital - the individual links, shared values, and understandings in society that enable individuals and groups to trust each other and so work together

Social injustice - the concept of unjust and unfair relations between social groups in society

Sustainability - the ability to maintain a certain level of use of resources, such as a natural resource, or an economic resource, without compromising the ability to use it in the future

Transportation Systems Plan (TSP) - the list of transportation projects created by the City of Portland. Not all projects on this list are guaranteed to be funded and built.

Vulnerability - the exposure of risk for a person, group, or other entity

Walking & Rolling - inclusive term for people traveling on foot, on a bike, using a wheelchair, with a stroller or other wheeled device. These mobilities are useful and efficient ways of moving people, resources, and information when fuel is not readily available

Wayfinding - a series or individual signs that guide navigation to a specific destination. Wayfinding can be in the form of metal signs, paint on the ground, or other materials

